

United States
Census
2000

Census 2000 Operational Plan

**Using Traditional
Census-Taking
Methods**

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U.S. Department of Commerce
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BUREAU OF THE CENSUS

CENSUS 2000 OPERATIONAL PLAN USING TRADITIONAL CENSUS-TAKING METHODS

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The Census 2000 Operational Plan Using Traditional Census-Taking Methods is subject to change based on Congressional funding, the results of our Dress Rehearsal, the advice generated from our ongoing consultation with stakeholders, and our experiences once we begin to implement the plan's specific elements.

United States
Census
2000

Section I.

Objectives and Strategies

CENSUS 2000 OPERATIONAL PLAN USING TRADITIONAL CENSUS-TAKING METHODS

I. OBJECTIVES AND STRATEGIES

The next census of the United States' population and housing will be conducted as of April 1, 2000. Reflecting a long tradition, Census 2000 will be the 22nd decennial enumeration in an unbroken chain that our nation has undertaken. From apportioning the U.S. House of Representatives to providing the data used by communities, businesses, and Americans everywhere, the decennial census is the cornerstone of our knowledge about our nation. The census is the only data-gathering operation in the United States that is mandated by the Constitution and the only one that produces a broad array of information at the smallest geographic levels.

OBJECTIVES OF CENSUS 2000

The goal of every census is to be the best census ever. So it is with Census 2000. The Census 2000 operational plan contains strategies to improve the completeness of the census that were identified using the following objectives:

- Make unprecedented efforts to count every household and person—from simpler, user-friendly forms to the better design of census operations
- Maintain an open process that diverse groups and interests can understand and support
- Minimize the differential undercount of racial and ethnic groups
- Minimize the overall net undercount
- Avoid erroneous enumerations to the greatest extent possible
- Achieve maximum accuracy in the most cost-effective way possible

FOUR STRATEGIES FOR FUNDAMENTAL CHANGE

The Census Bureau's operational plans for Census 2000 are built around four fundamental strategies:

- **Strategy One: Build Partnerships at Every Stage of the Process**

The Census Bureau cannot accomplish its goals alone. So for Census 2000, we are reaching out and forming partnerships to help us accomplish our objectives. We need to think in terms of every activity being done by a "best in class" provider. This means the Census Bureau must build:

- **Partnerships with state, local, and tribal governments.** These governments know their local conditions and circumstances better than the Census Bureau. They can help us correct our maps and address lists, and tell us where to put unaddressed questionnaires, called "Be Counted" forms, in locations where people will find them. They also can alert us to problems and advise us of opportunities to publicize Census 2000. The law now allows us to let these governments review our address lists—while maintaining confidentiality—and get their input.
- **Partnerships with community groups.** These groups know their constituents better than either the Census Bureau or any other governmental office. The groups can alert us to the best ways to communicate with their constituents to ensure they are included.
- **Partnership with the U.S. Postal Service (USPS).** For Census 2000, the Census Bureau will use address information provided by the USPS to enhance our comprehensive address file. The USPS also will deliver census questionnaires to over 80 percent of the addresses nationwide.
- **Partnership through privatization.** To be "world class" in every stage of the census, we will award contracts to private sector partners, such as:
 - **Advertising and promotion.** We will use private companies to manage our efforts to promote the census more visibly and effectively.
 - **Facilities management.** We will contract with data processing companies to manage the facilities where completed census forms are translated into computer files.

- **Strategy Two: Keep It Simple**

The simpler and easier Census 2000 is, the greater the response and the more accurate and less expensive it will be. Simplicity is the goal for every part of the process. For example:

- **User-friendly forms.** Our modern, powerful computer systems will allow us to use forms that are easier to read and complete. Moreover, because everyone is deluged with business mail, Census 2000 questionnaires must be attractive, motivating (by explaining the benefits and mandatory nature of the census), easy to understand, and simple to fill out. The Census 2000 forms will stand out because they will carry a well-publicized “census” identity. Commercial design firms have worked with us to simplify the forms and implement the user-friendly features demonstrated in our testing and research to increase response.
- **Multiple contacts.** We also have learned from our testing and research that repeated contacts and reminders pay big dividends in response rates. So for Census 2000, we will implement a multiple mail contact strategy. The first contact with each address will be an advance notice letter that alerts the recipient to the census and its benefits and offers to send a questionnaire in one of five other languages upon request. A few days later, a census questionnaire will arrive, noting that “your response is required by law.” Shortly thereafter, a postcard will arrive thanking those who have participated and reminding others to do so.
- **More ways to respond.** Our first priority is to deliver a census questionnaire to each address. For the first time, however, we also will place unaddressed Be Counted questionnaires in locations such as community centers, Walk-in Questionnaire Assistance Centers, and tribal offices for people to pick up and complete if they believe they have not been counted in the census. There will be a toll-free telephone number for respondents to respond on the telephone. We also plan to mail census forms in one of five other languages to households who request them in response to the advance notice letter. Finally, we will accommodate response on the Internet for many households.
- **Other simplified procedures**
 - A new method will enhance Census 2000 efforts to find people with no usual residence at shelters, soup kitchens, and other places where they obtain services.
 - Special targeted methods will improve the count for population groups and in areas that historically have had large undercounts.

- **Strategy Three: Use Technology Intelligently**

Dramatic advances in computing will allow Census 2000 to be simpler and more accurate. For example:

- **Digital "capture" of forms.** In Census 2000, for the first time, we will scan most of the completed questionnaires directly into computers that read handwriting. The completed forms will be read directly into computer files that will be used later for tabulation.
- **"Matching" software.** Sophisticated computer software will allow us to spot multiple responses from the same household. For example, if one spouse returns a regular questionnaire by mail while the other fills out a Be Counted questionnaire, we will be able to determine that both records come from the same household.
- **"Point and click" data tabulation.** Data seekers will be able to find the information they want from Census 2000. "Point and click" computing from our new American FactFinder (formerly Data Access and Dissemination System or DADS) system will allow them to select the specific information they want, instead of thumbing through census reports that may or may not have the answer they are looking for.

- **Strategy Four: Use Special Techniques to Improve Coverage**

The traditional approach to Census 2000 includes many improvements to the 1990 census design. We are automating many operations performed clerically in 1990, so that sources of error in manual operations are avoided. Our reengineered method of producing the address list and integrating it with the geographic database is expected to improve the quality of the files needed for controlling census operations and tabulating the results. Expansions of the marketing and promotion programs, the Telephone Questionnaire Assistance program, and enumeration support in languages other than English address lessons learned in the 1990 census. Furthermore, using operations such as a telephone followup and coverage improvement followup allows us to target efforts in areas where the potential for coverage improvement is greatest. These strategies are expected to enhance the quality of Census 2000.

EFFECTIVE MANAGEMENT TOOLS

The Census Bureau has instituted several management initiatives to facilitate a more effective and efficient process for planning and implementing Census 2000. Examples include:

- A sophisticated electronic Management Information System, with a Master Activity Schedule (MAS) component and a Cost and Progress (C&P) component, will provide information for Census 2000 operations. The MAS contains planning, preparation, development, data collection, data capture, data processing, data dissemination, and evaluation activities. The MAS also provides decision- support functions, such as critical path analysis. The C&P system reports daily progress for major collection, capture, processing and dissemination operations and periodic costs for field data collection activities. The system enables Census Bureau managers to monitor progress and some costs at various summary levels for collection or tabulation geography, as appropriate, on a timely basis.
- The Commerce Administrative Management System is a modern electronic financial management system, which, among other features, provides up-to-date financial data available for online query, as well as paperless processing for purchase orders and payments.
- The Census 2000 Cost Model provides an automated means to estimate staffing and budget requirements for Census 2000 based on a well-defined set of activities for the major components of census operations. The Cost Model tool is used to prepare the cost estimates for the budget process. It also is used to answer inquiries from Congress, the Department of Commerce, the Office of Management and Budget, senior managers at the Census Bureau, and our stakeholders.

Section II.

**Content of
the Report and
Overview of
Census 2000
Operations**

II. CONTENT OF THE REPORT AND OVERVIEW OF CENSUS 2000 OPERATIONS

CONTENT OF THIS REPORT

This report presents the objective, major features, and milestone dates for each major element of this operational plan for Census 2000. The milestone dates for each section are shown as months of the calendar year and, sometimes, as exact days. Questions or comments relating to specific aspects of the operational plan may be directed to Decennial Communications (301-457-3947).

The traditional census design does not employ expanded statistical sampling methods to supplement traditional enumeration methods. In addition to continued planning and preparation for the traditional census design, the Census Bureau is designing a Census 2000 process that does employ the expanded statistical methods. The detailed plans for a census using expanded statistical methods are available as a companion document to this one. We have concluded, consistent with the judgements of most other experts in this area, that a census using statistical methods would be more accurate generally, succeed in reducing the differential undercount of minorities and children, and be more cost-effective than the alternative.

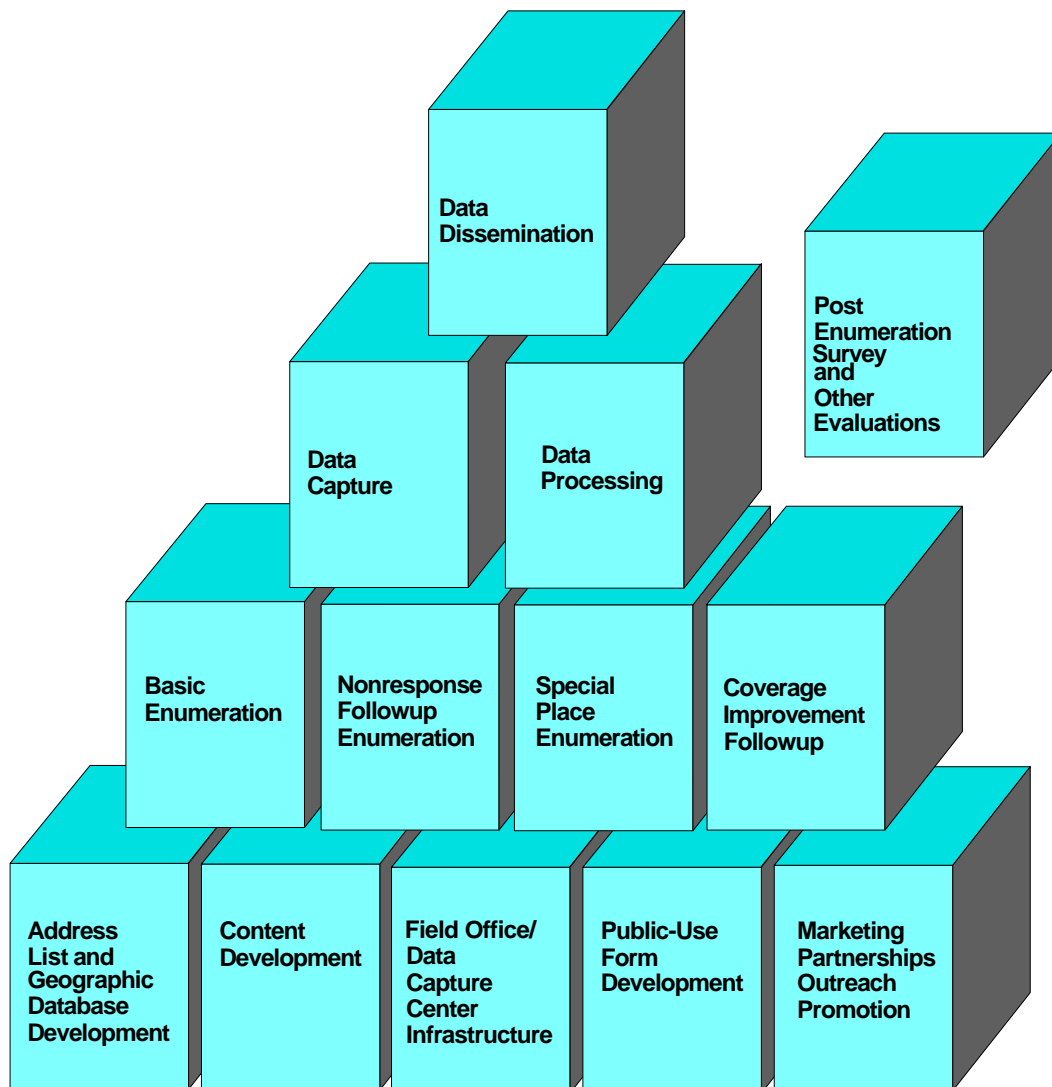
Puerto Rico will be enumerated using Update/Leave methodology, and the Island Areas will be enumerated under List/Enumerate procedures. All operations described in this document for those enumeration methods apply to Puerto Rico and the Island Areas, respectively. Considerations unique to Puerto Rico and the Island Areas are described in Chapters XIV and XV, respectively.

OVERVIEW OF CENSUS 2000 OPERATIONS

CURRENT STATUS

Census 2000 will enumerate the residents of the United States, Puerto Rico, and the Island Areas and federal employees and their dependents living overseas in the year 2000. Since the first census in 1790, the major phases of the census--planning and preparation, data collection and processing, and dissemination of results--have remained the same. Over time, however, the operational components of these phases have changed greatly. Changes have reflected the characteristics of our society, advances in technology and methodology, and experience gained in previous censuses. This overview describes major elements of the preparatory, data collection, data processing, dissemination, and evaluation phases of the *traditional design* of Census 2000. Figure II-1 depicts the key operations in each of these phases. The bottom layer of blocks shows activities comprising the

Figure II-1. Census 2000 Process



preparatory phase, which provide a broad and firm foundation for effectively supporting successive steps in the census process. The next set of blocks shows major data collection activities, and the third layer represents data processing steps, including the capture of information provided by the public. The top block shows the data dissemination phase, representing the goal of producing statistics that will serve our nation well. Finally, as data collection is concluded in most areas, census evaluations, including the Post-Enumeration Survey (PES), are conducted to measure census quality.

The “traditional” approach to census taking, used in previous censuses, is to count each person, household, and housing unit directly to the greatest extent possible. For Census 2000, we have intensified our efforts to encourage participation by expanding and improving ways for everyone to become aware of the census and to provide information about themselves and their households.

We are continuing to develop the activities described in this plan. In addition, we are investigating ways to effectively use administrative records of individual persons or housing units to improve the coverage of the census, and to provide an opportunity for local and tribal officials to review housing unit counts in mid- to late-2000.

The remainder of this section provides an overview of the preparatory, data collection, data processing, and dissemination phases of the traditional design of Census 2000. It provides a context for the remainder of the document by showing how each major element of the census relates to the others. As each element is described, we provide a reference to the section in this plan that provides more detail about it.

This overview first summarizes operations conducted during the data collection, data processing, and tabulation phases of the census. Having provided the context of those activities, it then describes the preparatory phase of the census, where the foundation of the other phases is laid. Finally, it describes testing, research, and evaluation components of the census.

DATA COLLECTION, DATA PROCESSING, AND DISSEMINATION

The major enumeration activities for Census 2000 occur between March and August 2000. Throughout the period of data collection, there is a parallel period of data processing where the information is entered into the computer and checked. These data processing activities support enumeration by identifying areas where information is missing or incomplete. Once data collection is complete, data processing continues to assure the accuracy of the census results. The final product from data processing is a complete set of files of characteristics for each

person and housing unit in the nation. Tabulations from these files are used to produce census results that will be used for many purposes.

Basic Data Collection

Just before April 1, 2000, most households in the United States, Puerto Rico, and the Island Areas will receive a census questionnaire on which their residents will be enumerated.

- For more than 80 percent of all households, the U.S. Postal Service (USPS) will deliver census questionnaires. Household residents will be asked to fill out their questionnaire and mail it back to the Census Bureau. This procedure, known as **mailout/mailback** (see section IX.A), covers most housing units that have city-style addresses (a house number and street name).
- For the vast majority of the remaining households, a census worker will leave the questionnaires, while updating the list of addresses for the area. This procedure is known as **update/leave**. (See section IX.A.) Again, household residents will be asked to fill out the questionnaire and mail it back to the Census Bureau.
- In the remaining areas, which are sparsely settled or remote, census workers collect information directly. These **list/enumerate** procedures are described further in section IX.A.
- Additional or modified procedures are used to ensure the complete enumeration of particular persons and areas:
 - ▶ Modified procedures are used to enumerate persons in special living situations. These procedures are described in sections IX.D and IX.E.
 - ▶ Various special procedures will also be used in areas where extra effort to complete the enumeration is needed. These procedures are described in section IX.F.
 - ▶ Basic census procedures will be tailored to conduct the best possible enumeration of American Indian and Alaska Native Areas and of Hawaiian Homelands. Planning for all aspects of the census in these areas is described in section X.

As questionnaires are returned by mail or by census workers, they will be checked in against the list of those sent out. The handwritten information on the forms will

be converted to computer-readable form and the data will be checked by computer to determine whether we need to attempt to contact households where one or more persons may be missing. These contacts are described in section IX.G.

During the period of time when questionnaires are being returned, we will provide opportunities for people to be counted if they believe they did not receive a questionnaire, or that they were not included on their household's questionnaire, or that they would not otherwise be counted for any reason. These opportunities are greatly expanded and intensified compared to previous censuses, when we assumed that everyone would receive a census questionnaire and be enumerated. For Census 2000, people will be able to pick up a "Be Counted" census form (see section IX.C) in a convenient location and mail it back to us. In addition, they will be able to use our Telephone Questionnaire Assistance service to get answers to questions about filling out the form, or to provide their information over the phone, if necessary. (See section IX.B.) We will encourage public response through a strong marketing campaign and a network of partnerships established with community organizations; state, local, and tribal governments; and others who can help encourage their constituencies to participate in the census.

NONRESPONSE FOLLOWUP

Even with our unprecedented efforts to encourage everyone to provide information, some persons and households will not do so. About 5 weeks after Census Day, we will send census workers to visit and enumerate people at these nonresponding addresses. This operation is called Nonresponse Followup. (See section IX.H.)

COVERAGE IMPROVEMENT FOLLOW UP

Up to this point, we will have used all available methods to encourage people to participate in the census. We will have visited all nonresponding households to collect information about the number and characteristics of all persons at those addresses. Without additional efforts, however, there will still be significant numbers of persons missing from the census enumeration. Therefore, we will carry out additional operations intended to improve census coverage. (See section IX.I.)

In particular, census workers will visit those housing units previously designated as vacant or nonexistent, but not confirmed by a second source. Experience shows that a small but significant portion of these units are, in fact, occupied, so this visit accounts for people who may be living there and who did not get counted previously. We will also visit addresses for which questionnaires were returned, but for which we have no data.

DATA PROCESSING

As described above, the information supplied by respondents will be entered into computers concurrent with field operations. The data are then processed to assure their accuracy and completeness. For example:

- The computer will check each questionnaire to determine if there is any indication that one or more persons may be missing. Whenever there is such an indication, we will follow up to add people as appropriate.
- When we receive Be Counted forms in the mail or census information over the phone, we will compare (match) that information to the information on mail returned questionnaires to make sure that missing people are included and that they are not counted more than once. (See section IX.J.)
- Computer checks are also done to determine how complete the data are for each person. These edits locate questionnaire items with missing data and use statistical techniques to impute values based on characteristics of similar households.

All of these operations help ensure that there is one record for each person in the census, and that all data records are complete.

Another set of processing operations ensures the integrity of the list of addresses and the housing units associated with them. There are several census operations that identify needed changes to our list of addresses. Whenever we identify new housing units or those that no longer exist, we must update our files. Processing these changes is a continuing operation involving data capture of changed addresses and locations and, if needed, changes to our geographic database.

DISSEMINATION

Once the final population counts have been processed, we are ready to provide the data. The first data produced from the census are the state totals to be provided to the President by December 31, 2000. These counts are used to reapportion the seats in the U.S. House of Representatives. Between that date and April 1, 2001, we will provide tabulations to each state so that they can redraw congressional, state, and local legislative districts. The boundaries of areas for which redistricting data are summarized are identified through partnerships with state officials, an effort that begins several years before Census Day. (See section XII.B.)

Most of the data from the census will be tabulated and disseminated electronically using the newly developed American FactFinder (formerly Data Access and Dissemination System or DADS). (See section XII.A.) This system will use new

technology to provide fast and flexible access to census data for a wide array of data users. In addition to tabulations, we will provide a full range of maps and other geographic products in hard copy and digital form. (See section XII.C.)

PLANNING AND PREPARATION

The previous section summarized the activities that take place to enumerate the population and produce census data. To ensure their accomplishment, there is a lengthy and complex period of preparing for all of the people, systems, and materials needed to make the census successful. Long before Census Day, we need to:

- ***Promote awareness of the census and its importance because the success of the census depends greatly on the cooperation of the public.*** Our unprecedented efforts to promote and publicize the census include working with the media; state, local, and tribal governments; and organizations that can encourage their constituents to participate. A paid advertising campaign will be coupled with a variety of special targeted activities to inform as many people as possible of the importance of the census and the many ways they have of providing their information. Our partnerships with governments and organizations recognize their expertise about the best ways to involve the people they serve. (See section IV.)
- ***Determine the questions that will be asked of the respondent, and other household members, and regarding their living quarters (see section V.A) and design the questionnaires so that they will provide accurate and complete information.*** We need to arrange for the questionnaire packages, including envelopes, to be printed and assembled. We are also arranging for delivery by the U.S. Postal Service or census workers on a precise schedule. To encourage as many households as possible to return their questionnaires, we also will send an advance notice letter before the questionnaires are mailed, and a thank you/reminder postcard shortly after the questionnaires are delivered. (See section V.B.)

In 2000, as in every census since 1940, a sample of households will be asked to respond to more questions than other households. Most households will receive a “short form,” but this sample will receive the “long form.” The sampling rate will vary across different geographic levels, with about one of every six households overall receiving the long form. (See section V.D.)

In addition to the census questionnaires and mailing packages, a number of other data collection forms must be designed, produced, and provided to support special data collection efforts. (See section V.C.)

- ***Compile lists of addresses and other identifying information about housing units and other places where people live or could live.*** Different procedures to compile address lists are used in areas where the U.S. Postal Service delivers the questionnaires and areas where census workers deliver them. (See sections VI.A and VI.B, respectively.) Once compiled, all of these addresses form the Master Address File (MAF), which must be complete and accurate to help assure that the census results are complete and accurate. For both types of areas, the process of compiling the lists of addresses begins long before Census Day, and several phases of updating take place using information from the U.S. Postal Service, local and tribal governments, and census workers. (See sections VI.E., VI.C, and VI.D, respectively.) Each of these sources provides unique and important contributions to the accuracy of the information on the address lists. Equally important, a unique location description must be associated with each address. These locations are needed so census workers can find addresses during field visits, data provided by respondents in multiple ways can be matched efficiently, and data can be tabulated in the correct geographic location. In areas with city-style addresses, the address itself provides a unique location description, but in other areas, a person must visit the living quarters, describe it in words, and spot it on a map.

Our tool for identifying the spatial location of living quarters and the other geographic information necessary for producing maps and census tabulations is a database called TIGER®*. (See section VII.) The TIGER database, which accounts for the entire area of the country, initially was developed during the 1980s and is updated continually. It contains information on physical features, including their names and attributes (for example, the address range associated with a street segment), the boundaries of legal, administrative, and statistical geographic entities, and other relevant data. Using the TIGER database, we can associate each address in the Master Address File with its corresponding record in TIGER to produce address files or listings and accompanying maps for use in census operations and to tabulate the census results. Throughout the decade and especially during the census, the address list and the TIGER database are linked and updated to ensure that both are kept current and consistent.

- ***Establish an extensive set of temporary offices to support the conduct of data collection, data capture, and data processing operations.*** Local Census Offices will manage the massive recruiting efforts needed to conduct census operations, report progress, and transmit completed work. Establishing the infrastructure for these offices requires long lead times in order to find and configure space; purchase equipment, furniture, and supplies; and recruit and train census workers for temporary positions. (See section VIII.A.)

*TIGER® is a registered trademark of the U.S. Bureau of the Census. For ease of presentation, the trademark symbols for TIGER and TIGER-related products are omitted from the text.

Precensus address listing operations will be managed by a network of Census Field Offices (CFOs), and data collection operations will be managed by a network of Local Census Offices (LCOs). All of these offices will report to Regional Census Centers in the same cities where the Census Bureau's permanent Regional Offices are located. The decentralized networks of offices will be responsible for recruiting and managing staff for all field operations. Their establishment and management will be performed by Census Bureau staff.

There will be four Data Capture Centers, one of which is the Census Bureau's permanent data processing facility, the National Processing Center (NPC), in Jeffersonville, Indiana. The other three will be in Pomona, California; Phoenix, Arizona; and Baltimore County, Maryland. Permanent Census Bureau staff will establish and manage activities in the NPC, which will perform both the same data capture functions as the other centers and several post-census processing operations after the other centers close. Establishing and managing the other three Data Capture Centers, including their equipment, software, and technical maintenance, will be performed under contracts administered by Census Bureau staff. Contractors will be responsible for: (1) checking in census questionnaires by comparing identifying information on them to the Master Address File; (2) preparing the questionnaires for data capture; (3) capturing the data by using electronic imaging; and (4) ensuring the consistency of data files with the actual respondent-supplied information. The completed capture files will be transmitted to headquarters for the operations needed to provide a final file of detailed census data. (See section XI.B.)

Computer specialists at headquarters, who work closely with statisticians and subject matter experts, will have designed an automated data processing system that supports preparatory activities, operates concurrently with capture operations during data collection, and processes the captured data. During the preparatory phases of the census, this system will support all activities related to building the address list and using the list for mailing questionnaires, selecting the sample of long form questionnaires, and providing control files for field data collection and data capture. During census data-collection and capture operations, these headquarters processing systems will match and unduplicate responses for people who may otherwise be counted more than once, and identify cases for field and telephone operations. After data collection and capture, these systems will perform final edits to ensure complete information for and about each person, conduct statistical estimation and variance procedures for long-form data, and format complete data files to be used to produce census results in a variety of media. (See section XI.C.)

Recruiting temporary staff for census operations, in particular data collection, will require hiring substantial numbers of persons for census jobs. Before hiring people, the Census Bureau will test them, make sure they meet other requirements, and conduct applicant background checks. (See section VIII.B.)

A sophisticated and extensive telecommunication network will support all communication among the public, our decentralized offices, and headquarters. (See section XI.A.)

Telephone Questionnaire Assistance will be performed under contract. The contractor will conduct operations to answer questions about the census questionnaire and take information from respondents over the telephone, under the direction of Census Bureau staff.

Because the census must provide high quality information, it is critical that each operation that contributes to the accuracy of that information be performed well. Detecting and correcting errors that might otherwise be introduced is accomplished using Quality Assurance (QA) procedures. The operations for which QA procedures will be implemented are described in section XIII.C.

- ***Design a system to produce tabulations and other data products from the census.*** Our first products will be the state counts for the President, and block level data for the states. We will work with data users to define other basic products, and are developing American FactFinder (formerly DADS) for timely online access to all census data.

TESTING, DRESS REHEARSAL, EVALUATION AND RESEARCH

We are completing a Dress Rehearsal of Census 2000 methods and procedures. The design of the Dress Rehearsal was based on testing and research conducted earlier this decade to address problems identified in the 1990 census. Continual improvement in the census process will again rely on Census 2000, which will include several studies to evaluate census quality and provide information for future census planning. In fact, planning for the 2010 census has already begun. Research and development efforts for 2010 will take advantage of the Dress Rehearsal and Census 2000 to provide a useful context for testing. For example, data from the Dress Rehearsal and Census 2000 (as well as other sources) will be used to explore the feasibility of using administrative records for the 2010 census. Other ideas for research studies and experiments to develop future census methods also will be studied in Census 2000. And, of course, we will evaluate the coverage of Census 2000 using a Post-Enumeration Survey and Demographic Analysis. In this way, the Census Bureau will continue its tradition of adapting census procedures to reflect our changing population, times, and technology. (See section XIII for further discussion of these efforts.)

United States
Census
2000

Section III.
**Legal
Requirements**

III. LEGAL REQUIREMENTS

The decennial census is mandated by the U.S. Constitution (Article I, Section 2) to provide the population counts needed to apportion the seats in the U.S. House of Representatives among the states. However, the Constitution does not prescribe how the decennial census should be conducted. In Title 13, U.S. Code, the Congress gave the Secretary of Commerce (and, by delegation, the Director of the Census Bureau) discretion to take the decennial census in such form and content as he may determine.

The planning and conduct of Census 2000 must comply with a number of legal requirements, some of which specify deadlines, as described in the following:

- Under the terms of Title 13, the Secretary of Commerce must deliver state population counts to the President within 9 months of Census Day (by December 31, 2000). These counts are used to reapportion the seats in the U.S. House of Representatives.
- Public Law 94-171 requires that the Census Bureau provide selected census tabulations to the states by April 1 of the year following the census year. The states use these tabulations to redraw the boundaries of congressional districts, as well as other areas used for state and local elections.
- Under the Voting Rights Act, the Census Bureau is required to provide to the states race and ethnicity data for small geographic areas to be used for the redistricting process specified in P.L. 94-171. The race and ethnicity categories required are those mandated by the standards for the classification of federal data on race and ethnicity. (See page III-2.)
- The geographic scope of the population we enumerate in a decennial census is specified in Title 13 as covering the 50 states, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands of the United States, the Commonwealth of the Northern Mariana Islands, and Guam, and other areas as may be determined by the Secretary of Commerce. In Census 2000, we also will enumerate the Pacific Island Area of American Samoa.
- The Secretary of Commerce, acting under the authority of Title 13, is required to report to the Congress twice regarding the content of the census questionnaires: first, at least 3 years before Census Day (by April 1, 1997) on the subjects proposed for inclusion and again at least 2 years before the census (by April 1, 1998) on the proposed specific question wording. Accordingly, on March 31, 1997, the Census Bureau submitted to the Congress the list of subjects proposed for inclusion in Census 2000. Then, on March 30, 1998, the

proposed questions for Census 2000 -- seven on the short form and 52 on the long form -- were submitted to Congress. (See section V.A.)

- All of the questions on the Census 2000 questionnaire were either mandated (that is, federal law explicitly called for decennial census data) or required (that is, federal law explicitly called for data and the decennial census was the only or historical source or there were case law requirements imposed by the federal court system). For example, Congress has enacted laws requiring the use of data to allocate federal funding to states, cities, school districts, and other governmental units to administer a wide variety of important programs.
- On October 30, 1997, the Office of Management and Budget (OMB) issued revisions to the standards for the classification of federal data on race and ethnicity. These standards provide guidelines on how all federal agencies are to collect and present data on race and ethnicity, as well as preliminary guidance on the tabulation of the data. According to the standards, there are five categories for data on race: American Indian and Alaska Native, Asian, Black or African American, Native Hawaiian and other Pacific Islander, and White. There are two categories for data on ethnicity: 1) Hispanic or Latino and 2) not Hispanic or Latino. In addition, all federal agencies are encouraged to report at a minimum a total of the number of respondents reporting "more than one race." The Office of Management and Budget plans to provide further guidelines on tabulating and publishing data on race and ethnicity in early 1999.

On census forms, respondents may select one or more of the above-referenced racial categories and/or indicate "some other race."

- Public Law (P.L.) 94-311 requires the use of Spanish-language forms and Spanish-speaking interviewers in areas having significant concentrations of Hispanic populations. In Census 2000, we plan to mail census forms in Spanish (or one of four other languages) to households who request one in response to an advance notice letter informing respondents that they will be receiving a questionnaire shortly.
- Before the census forms go to print, the OMB is required by law to review the questions to ensure they meet the data needs of the executive branch departments and agencies responsible for implementing programs mandated and authorized by the Congress. In addition, under the Paperwork Reduction Act (Title 44), the OMB must see that the time burden for a household to respond to the questionnaire is held to a minimum.
- P.L. 103-430 requires that the U.S. Postal Service provide its address information to the Census Bureau to improve the Master Address File (MAF).

- Established in response to the requirements of P.L. 103-430, the Local Update of Census Addresses program provides an opportunity for local and tribal officials to designate a liaison to review the address information in the MAF for their jurisdiction and the geographic information in the Census Bureau's geographic database (known as TIGER) to improve their completeness and accuracy.
- As specified in Title 13, Census Day for Census 2000 is April 1, as it has been for each decennial enumeration since 1930. All census questions generally are to be answered with reference to April 1, regardless of when the questionnaire is filled out.
- Title 13 guarantees the confidentiality of respondents' answers to the census forms. In fact, the Census Bureau takes extraordinary steps throughout the entire census process to ensure the confidentiality of census information. All Census Bureau employees must take an oath of confidentiality. As required by Title 13, the Census Bureau maintains tight security over completed questionnaires. Furthermore, disclosure-avoidance programs during the data tabulation phase make certain that individual persons or housing units cannot be identified, either from paper or electronic tabulations.
- Title 44 establishes that individual census information from the decennial census cannot be made public for 72 years.
- P.L. 105-119 (also known as the "Department of Commerce and Related Agencies Appropriations Act, 1998"), section 210 establishes a board known as the Census Monitoring Board. The function of the board, as stated in the legislation, is "to observe and monitor all aspects of the preparation and implementation of the 2000 decennial census (including all dress rehearsals and other simulations of a census in preparation therefor)." The board will cease to exist on September 30, 2001. Section 209(j) of this same law also states that there should be sufficient funds "to plan, test, and become prepared to implement a 2000 decennial census, without using statistical methods, which shall result in the percentage of the total population actually enumerated being as close to 100 percent as possible." It also requires that the Census Bureau, for both Census 2000 and the Dress Rehearsal, make "publicly available" for specifically enumerated levels of geography "the number of persons enumerated without using statistical methods."

United States
Census
2000

Section IV.
**Marketing
Program**

IV. MARKETING PROGRAM

OBJECTIVE

The Census 2000 Marketing Program will be, for the first time, an integrated communications effort. The objectives of the campaign are to increase awareness of Census 2000 and boost response rates.

MAJOR FEATURES

There are three phases to the Marketing Program. Prior to Census Day, the program will be geared toward building awareness that the census is approaching and how it will benefit the community. During the mailout/mailback period, the campaign focus will shift to motivating people to return their questionnaires promptly to increase the initial mail response rate. The marketing program also will encourage cooperation with census enumerators during the followup operation with nonresponding households and will let people know the census is not over.

The comprehensive marketing and partnership strategy includes:

- Partnerships
- Paid advertising
- Special methods to encourage response from direct mail
- Media public relations
- Promotions and special events

Partnerships

The Census Bureau has formed partnerships with other federal agencies and state, local, and tribal governments, as well as with community-based organizations and businesses. The Census Bureau recognizes the unique local knowledge, experience, and expertise these partners can bring to planning and taking an accurate census. Partnerships have each member performing those activities for which the particular partner is best qualified, assuring the most effective expenditure of staff and financial resources.

To establish and maintain continuing liaison and partnership with government and nongovernment entities, we are hiring three types of Census Bureau partnership specialists throughout the country: government, media, and community specialists. The first wave of 12 government partnership specialists has been on board since 1996. We have hired an additional 185 partnership specialists and plan to hire more.

The Census Bureau will coordinate the full range of Census 2000 programs with governmental and nongovernmental partners to ensure that we do not make unnecessary or overlapping requests of those willing to work in partnership. We also will expand in-kind support, such as printing, to local partners.

Census 2000 will provide numerous opportunities for government and nongovernment entities to participate in partnership activities. Examples of these activities include:

- The Census Bureau has formed a partnership with the U.S. Postal Service to use its address information to enhance the Census 2000 Master Address File. Working with the U.S. Postal Service provides the best nationwide source of address updates, which will help reduce the number of households missed in Census 2000.
- Under the Local Update of Census Addresses program (see section VI.C), partnerships with local and tribal governments are being formed to provide valuable assistance in reviewing and updating the Master Address File.
- Partnerships with governments and organizations will support Census 2000 promotional activities by issuing public statements of endorsement, holding press conferences, placing census articles in newsletters, including census messages in employee paychecks, sponsoring census promotional events, and posting census promotional material in agency facilities.
- Partnerships with local organizations will aid in recruiting candidates to apply for census office and field enumerator positions. Temporary jobs will be available in all geographic areas.
- Partnerships with community-based organizations and local and tribal governments will identify strategic and high visibility locations in the community to place unaddressed questionnaires, called "Be Counted" forms, for people to pick up and complete. These partners also will recommend locations for Walk-in Questionnaire Assistance Centers and for office space to test and train temporary census workers.
- During the enumeration period, partnership and outreach efforts will remind people of ways to respond if they did not receive a questionnaire. Mail response rates will be available so that outreach/partnership efforts can target areas that are slow to respond.

Paid Advertising

For the first time, we will use a paid advertising campaign for a decennial census. In designing the Census 2000 paid advertising campaign, we have benefitted greatly from the advice given by the U.S. military, the U.S. Postal Service, and private communications contractors, as well as from our own survey and focus group research. Young and Rubicam Inc. has been selected to conduct the Census 2000 advertising campaign. The major components will include:

- **National media campaign.** A national media campaign will be aimed at increasing mail response. The campaign will include television (both broadcast and cable), radio, and print media, and outdoor advertising.
- **Targeted advertising effort.** An advertising effort directed at increasing mail response among targeted audiences, especially historically undercounted populations, will use national, regional, and local media outlets. The local effort will use, for example, community news outlets, posters, flyers, and mass transit advertising.
- **Special advertising messages and campaigns.** An early educational message targeted to hard-to-enumerate populations will be launched in October of 1999 and will run as an enhancement to the primary advertising campaign. After the completion of the national media campaign, a second national campaign will increase the public's awareness of the nonresponse followup operation and the importance of cooperating with enumerators.

Special Methods to Encourage Response From Direct Mail

- **Integrated mailing package.** For the first time, the mailing package design--including the questionnaires, envelopes, motivational slogans, and logo--will be wholly compatible and integrated into the design of the rest of the marketing plan.
- **Direct mail campaign and mail strategy.** To increase questionnaire mail response, the Census Bureau will use a strategy that will focus on multiple mail contacts with respondents, including mailing respondents an advance notice letter, a questionnaire, and a thank you/reminder postcard.

Media Public Relations

For Census 2000, the public relations effort will be decentralized with media specialists assigned directly to local census offices to cultivate press contacts and respond to media inquiries.

Promotion and Special Events

A variety of special events--such as parades, athletic events, and public service television documentaries--will be co-sponsored by state, local, and tribal governments and by community organizations and businesses. A national promotional event also is planned. The events will emphasize the importance of participating in the census and will motivate people to respond.

A program called Census in the Schools will provide teachers with Census 2000 educational materials and take-home materials for their pupils at census time.

MILESTONES

July 1996	Began hiring 12 government partnership specialists (one per region)
July 1996	Began forming partnerships with local and tribal governments for geographic programs
April 1997	Began forming partnerships with national/umbrella governmental and nongovernmental organizations
October 1997	Awarded contract to Young and Rubicam Inc. for a paid advertising campaign
October 1997	Began hiring media, community, and additional government partnership specialists
October 1997	Began forming partnerships with local media, community organizations, and businesses
March 1998	Implemented the prototype advertising campaign for Census 2000 during Dress Rehearsal
January 1999	Implement Census in the Schools program
October 1999-January 2000	Conduct the early education message
February-April 2000	Implement the national media campaign encouraging households to mail back their questionnaires
February-April 2000	Implement special promotional events
April-July 2000	Conduct the nonresponse national campaign

United States
Census
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Section V.
**Questionnaire
Content, Data
Collection Forms,
and Sampling Plan**

V.A. QUESTIONNAIRE CONTENT

OBJECTIVE

The Census 2000 questionnaires must contain data the nation needs to meet the statutory data requirements of the federal agencies and to administer state, local, and tribal government programs. The Census Bureau's job was to balance these needs against the length of the questionnaires and the burden on respondents to complete them.

A formal content development process was used to select the questions for the census forms. The objective was to develop questions that are easy to understand and answer by all segments of the population and thus yield the highest and most valid response.

MAJOR FEATURES

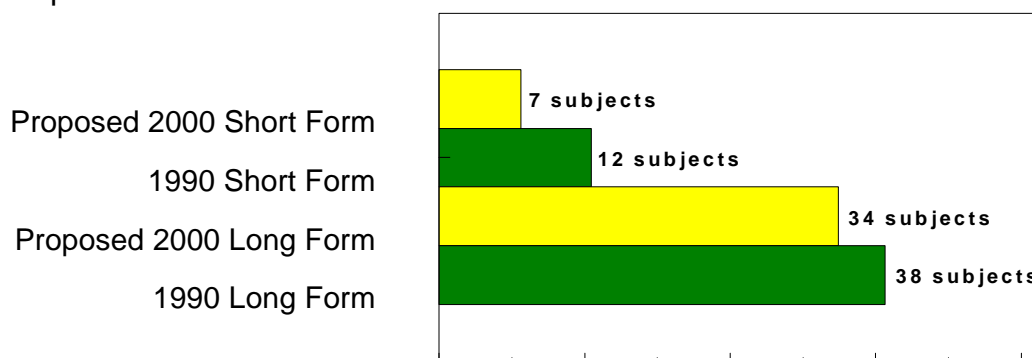
The major components and general timing of Census 2000 content development activities are shown in figure V-1.

- Shortly after the 1990 census, the Census Bureau reviewed and evaluated the 1990 census questions through a content reinterview.
- The Census Bureau, with the support and cooperation of the Office of Management and Budget (OMB), then organized an extensive review and consultation program to determine which subjects should be included in Census 2000.
- We assessed the legislative and geographic requirements of census data for both the federal and nonfederal sectors. *Federal* agencies were asked to identify all legal mandates and programs requiring census data. *Nonfederal* requirements were obtained by means of a survey directed to a broad spectrum of data users, such as state, local, and tribal governments; ethnic and community organizations; the business sector; academic researchers and librarians; religious groups; and the general public.
- We maintained regular contact with our standing advisory committees, expert panels, professional associations, housing data-user groups, and community and ethnic organizations to ensure that all segments of the data-user community were kept informed throughout the content development process.

Figure V-1. Content Planning Path for Census 2000

January 1999

- Two census tests were conducted to evaluate the questionnaire content proposed for Census 2000. The most extensive of these was the 1996 National Content Survey (formally known as the U.S. Census 2000 Test), which was designed to test new and revised question wording, formatting, and sequencing. The 1996 Race and Ethnic Targeted Test (formally known as the 1996 Census Survey) examined several major possible changes to the race and ethnicity questions for Census 2000. Also, the Census Bureau, in partnership with the Bureau of Labor Statistics, asked supplemental questions on race and ethnicity as part of the May 1995 Current Population Survey. During this time, the Census Bureau also conducted a wide range of focus group studies and cognitive research to elicit information about questionnaire content and design.
- On March 31, 1997, as required by law, the Census Bureau submitted a list of subjects planned for inclusion in Census 2000 to the Secretary of Commerce and to the Congress. As the chart below shows, both the short and long forms proposed for Census 2000 have fewer subjects than their 1990 census counterparts.



- Table V-1 provides the current plans for content for the Census 2000 questionnaire.
- As required by law, on March 30, 1998, we submitted the actual questions for Census 2000 to the Congress. Thus, we have determined the particular wording, format, and sequence of individual questions. To make these critical decisions, the Census Bureau was guided by:
 - Any budget and content constraints imposed by the Congress
 - Results of our Census 2000 research and testing program
 - Advice generated from our ongoing consultation process with stakeholders
 - Legislative requirements for data from the questions

TABLE V-1. SUBJECTS PLANNED FOR INCLUSION IN CENSUS 2000**100-PERCENT SUBJECTS****POPULATION**

Name
Sex
Age
Relationship
Hispanic origin
Race

HOUSING

Tenure (whether home is owned or
rented)

SAMPLE SUBJECTS**POPULATION*****Social characteristics:***

Marital status
Place of birth, citizenship, and
year of entry
Education-school enrollment and
educational attainment
Ancestry
Residence 5 years ago (migration)
Language spoken at home
Veteran status
Disability
Grandparents as caregivers *

Economic characteristics:

Labor force status (current)
Place of work and journey to work
Work status last year
Industry, occupation, and class of
worker
Income (previous year)

HOUSING***Physical characteristics:***

Units in structure
Number of rooms
Number of bedrooms
Plumbing and kitchen facilities
Year structure built
Year moved into unit
House heating fuel
Telephone
Vehicles available
Farm residence

Financial characteristics:

Value of home
Monthly rent (including congregate
housing)
Shelter costs (selected monthly owner
costs)

*New subject for Census 2000.

1990 CENSUS SUBJECTS DROPPED FOR CENSUS 2000**POPULATION**

Children ever born (fertility)
Year last worked (*An abbreviated screener will
be included with questions about industry,
occupation, and class of worker; this will allow
us to reduce respondent burden and properly
define the "experienced civilian labor force."*)

HOUSING

Source of water
Sewage disposal
Condominium status

January 1999

- The questions we asked in the Census 2000 Dress Rehearsal were, to the greatest extent possible, the same as those we will include in Census 2000. In this way, we develop prototypes of the products planned for Census 2000, solicit comments from our stakeholders, and fine-tune the census products.
- The Census Bureau also is required by law to submit the recommended questions to the OMB, which has the responsibility of ensuring that the questions meet essential data needs and that respondent burden (the time it takes for the average household to fill out a questionnaire) is held to a minimum. The Census Bureau submitted these to OMB on June 30, 1998.

MILESTONES

March 31, 1997	Submitted subjects planned for Census 2000 to the Congress
March 30, 1998	Submitted questions planned for Census 2000 to the Congress
June 30, 1998	Submitted questions planned for Census 2000 to OMB

V.B. MAILBACK QUESTIONNAIRE FORMS

OBJECTIVE

The goals in developing the Census 2000 questionnaires were to increase mail response and accuracy of the information collected. The Census Bureau is accomplishing this by:

- Designing forms that are more respondent-friendly
- Increasing the number of mail contacts with respondents
- Placing a mandatory appeal on the envelope

MAJOR FEATURES

In Census 2000, the questionnaire mailout/mailback system again will be the primary means of census-taking. Cities, towns, and suburban areas with city-style addresses (house number and street name), and rural areas where city-style addresses are used for mail delivery will comprise the mailout/mailback areas. In areas where the addresses are predominantly noncity-style, census enumerators will deliver addressed questionnaires for respondents to mail back.

Respondent-Friendly Design

The Census Bureau worked with private sector designers to produce streamlined forms that are easy to read and understand, show people why they are asked the questions, and are simple to fill out and mail back. One key innovation is that the design of the complete mailing package--including the outgoing and return envelopes, cover letter, questionnaire, motivational slogans, and logo--will be compatible and integrated with the rest of the marketing and communications effort.

The following user-friendly design features were shown in our testing and research program to improve response; they were incorporated into the design of the Dress Rehearsal and will be incorporated into the Census 2000 forms:

- A larger, easier-to-read font
- Graphic icons distributed throughout the forms to illustrate the benefits of the census to the individual and community
- Strong visual contrast--using color and shading--between the questions and answer boxes to make it easier to identify the correct space to record an answer

- All questions for each household member grouped together in one space instead of in the row-column answer format with the questions placed down the left-hand side of the page and the names of household members placed across the top
- Navigational aids such as arrows to guide the respondent through the questionnaire
- Respondent instructions directly on the form instead of in a separate guide

While redesigning the forms, the Census Bureau is incorporating the specifications required for printing, postal delivery, and electronic image data capture.

Types of Mailback Questionnaires

Census 2000 will include two types of questionnaires for mailout:

- A short form will be delivered to approximately 83 percent of all housing units. This form will allow the respondent to list up to 12 household members. It will provide space for reporting the basic population and housing data for up to six household members and the housing unit.
- A long form will be delivered to a sample--approximately 17 percent--of all housing units. This form will allow the respondent to list up to 12 household members. It will include the short-form questions, as well as additional questions on the characteristics for up to six household members and the housing unit. Obtaining these detailed, more comprehensive data on a sample basis is less costly than obtaining the same information from all housing units.

Delivery of Questionnaires in Other Languages

We plan to mail census forms in five other languages (Chinese, Korean, Spanish, Tagalog, and Vietnamese) to households who request them in response to the advance notice letter.

Multiple Mailing Strategy

The Census Bureau will use a new mailing strategy for Census 2000. This strategy, which has been demonstrated in our testing and research to boost response, increases the number of mail contacts we have with respondents. The multiple mail contacts consist of:

- An advance notice letter to every mailout address that alerts households that the census form will be sent to them soon

- A questionnaire to every mailout address
- A postcard to every mailout address that serves as a thank you for respondents who have mailed back their questionnaire or as a reminder to those who have not

A full-scale multiple mailing strategy, using first-class postage for all mailing pieces, will yield maximum mail response and increase the likelihood of delivery to the correct address.

MILESTONES

December 1998	Government Printing Office began awarding contracts for printing short forms and long forms
February 2000	Complete questionnaire printing and addressing for mailing
March 13-March 15, 2000	U.S. Postal Service delivers a questionnaire to every mailout address
March 2000	Census enumerators deliver questionnaires in most areas with noncity-style addresses

V.C. FIELD DATA COLLECTION FORMS

OBJECTIVE

While the mailout questionnaires will account for the bulk of Census 2000 data collection, the Census Bureau is developing many other forms to ensure that everyone has the opportunity to participate in Census 2000. These special forms will be used to enumerate people who live in a residence other than a house, apartment, or mobile home, or to increase the participation of people who might otherwise go uncounted in the census.

MAJOR FEATURES

- Several types of questionnaires--containing only population questions for one person--will be used to enumerate specific segments of the population. These forms will be used to count people in living arrangements requiring special operations, such as college dormitories, nursing homes, shelters, prisons, and persons on military bases and on ships assigned to a home port in the United States. Long-form versions are being developed for some of the forms; many will be translated into Spanish.
- Short- and long-form "simplified enumerator questionnaires" are being developed that are worded to conform to a personal interview method of data collection. These forms will be used as basic data collection instruments by field enumerators during personal visits to households.
- A short form is being prepared for the Be Counted program (see section IX.C) for people who did not receive a questionnaire or believe they were not included on a census form. These unaddressed Be Counted questionnaires will be printed in English and five other languages and placed at locations where people frequent, such as in community centers and Walk-in Questionnaire Assistance Centers. The responses on these forms will be checked against census records to eliminate duplications.

MILESTONES

April 1999 Begin questionnaire printing

January 1999

V.D. SAMPLING PLAN FOR THE LONG-FORM QUESTIONNAIRE

OBJECTIVE

Since the 1940 census, the detailed decennial census data have been collected from a sample of housing units. In Census 2000, the Census Bureau also will deliver the long-form questionnaire to a sample of housing units. This use of sampling will allow the Census Bureau to reduce cost and maintain the level of respondent burden comparable to the 1990 census.

MAJOR FEATURES

Decennial census data collected on a variety of socioeconomic and housing subjects are required by federal agencies for implementing programs defined in legislation. In addition, these data are used by state, local, and tribal governments, as well as the private sector, for planning and developing social and economic policy and a myriad of other uses.

To collect these valuable data, Census 2000 will implement a **variable rate sampling plan**. Use of variable sampling rates will allow for more efficient allocation of the sample and will maintain the accuracy and reliability of census data at small geographic levels (block groups, census tracts, and small communities) while reducing respondent burden.

The variable rate sampling scheme for the Census 2000 long form will be similar to the 1990 census scheme and basically will be as follows:

- The overall sampling rate will be about 1-in-6 households or 17 percent.
- We will assign sampling rates of 1-in-2, 1-in-4, 1-in-6, or 1-in-8 to functioning governmental units and census tracts based on precensus counts of housing units. School districts will be considered governmental units.

MILESTONES

September 1998

July-August 1999

Determined final long-form sampling methodology

Determine long-form sample to implement variable rate sampling methodology

January 1999

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2000

Section VI.

Address List Development and Review/Update

VI.A. ADDRESS LIST DEVELOPMENT

OBJECTIVE

The Census Bureau is constructing a complete list of living quarters (addresses or location descriptions) to use for questionnaire delivery and to control the collection and tabulation of Census 2000 data.

MAJOR FEATURES

To enumerate and tabulate Census 2000, the Census Bureau must identify all living quarters and locate these living quarters with respect to the geographic entities for which we report data. We accomplish this by creating and maintaining a Master Address File (MAF) that identifies all living quarters and by spatially locating those addresses using our geographic database called TIGER (Topologically Integrated Geographic Encoding and Referencing). The building and maintenance of the MAF and TIGER involve partnerships with other federal agencies, state, local, and tribal governments, regional and metropolitan planning agencies, the private sector, and nongovernmental organizations.

For Census 2000 to be as accurate, complete, and cost effective as possible, the address list that serves as the basic control for the census must be as accurate and complete as possible. If an address is not on the list, then its residents are less likely to be included in the census. Recognizing this fundamental connection and based on evidence gained from testing, the Census Bureau completed an intensive reengineering of the Census 2000 Address List in September 1997. The reengineering led to changes in the initial Census 2000 plan that will increase the accuracy and completeness of the Census 2000 address list.

The inventory of all living quarters includes addresses or location descriptions for each housing unit and each group quarters. Except where the address list is created at the time of enumeration (for list/enumerate areas), each listing must have a complete address that can be used for mailing a census questionnaire or a location description that can be used by an enumerator to locate the living quarters. Each listing must be linked to the TIGER database.

We are creating and maintaining the MAF through a series of operations. Different operations are aimed at areas with city-style addresses and areas without city-style addresses.

In areas where most mailing addresses are city style (for example, 101 Main Street), we:

- Create the MAF by combining addresses from the 1990 census Address Control File with addresses in the U.S. Postal Service (USPS) Delivery Sequence File (DSF). The 1990 census Address Control File is a nationwide file of addresses for all living quarters included in the 1990 census. The DSF is a national file of individual mail delivery point addresses. As part of a cooperative agreement, the USPS provides the Census Bureau with updated DSFs on a regular basis.
- Locate these addresses in the TIGER database. Where we cannot locate an address, the location is researched and resolved through an office or field operation or through assistance from local partners. As a result of this research, we identify new features and correct and add address ranges to the TIGER database. (See section VII.)

In areas where most mailing addresses are not city style (for example, a post office box or rural route number) we need to determine where the housing units are located so we can send an enumerator. We identify these areas for different enumeration methodologies using information on the types of mail delivery, the types of addresses, and our regional offices' knowledge of the areas. We create the address list in these areas during:

- Address listing operations. In areas where the addresses are predominately noncity style, the Census Bureau will create an address list through a door-to-door canvassing operation and identification of the location of each structure on census maps. The completed address listings and their map locations will be recorded in digital format and added to the MAF and TIGER databases, respectively. We will enumerate these areas by having enumerators leave addressed census questionnaires, which residents will complete and mail back, during an update/leave operation (enumerators also update the address list and census maps during this operation). Where there is no mailing address for the listing or the mailing address is a noncity-style address, the listing will include a location description.
- List/enumerate operations. Census enumerators will create the address list at the time of enumeration while canvassing their assignment areas and conducting interviews with respondents. The completed address listings and their locations recorded on a census map will be added to the MAF and TIGER databases.
- Map update operations. Before the address listing and list/enumerate operations, the Census Bureau will work with local and tribal government partners to update the streets and roads in the TIGER database, especially for high-growth areas and areas with new street names. Updating the TIGER database for these areas will make the address listing more efficient and help ensure that living quarters are not missed.

We are incorporating local knowledge to update the MAF through the Local Update of Census Addresses (LUCA). (See section VI.C.)

A separate operation is building an inventory of all special places such as nursing homes and colleges. We interview an official at each special place using a Special Place Facility Questionnaire. The responses to the questionnaire identify each group quarters and any housing units associated with the special place. We classify group quarters and any housing units according to whether they will be enumerated as part of special place enumeration or through regular enumeration. We add the group quarters and housing units to the MAF and link them to the TIGER database.

In city-style address areas, we introduced two operations as a result of the reengineering effort to improve the quality of the MAF. The Census Bureau will conduct a 100 percent block canvass to ensure consistently good address coverage in the MAF and to ensure correct geographic locations for all addresses. We also will conduct a Postal Check in which we will ask USPS letter carriers to validate the addresses in the MAF, identifying and adding addresses that are missing.

MILESTONES

September 1997	Determined areas for different enumeration methodologies
January-April 1998	Conducted the Map Update program for areas without city-style addresses
May 1998-February 1999	Conduct the LUCA program for city-style address areas
July-December 1998	Conduct address listing operations (except list/enumerate)
January-April 1999	Conduct the LUCA program for address listing areas
January-May 1999	Conduct 100 percent block canvassing
January-December 1999	Conduct targeted map update operations for rapid-growth areas in address listing and list/enumerate areas
July 1999	Deliver first nationwide MAF for Census 2000
January-February 2000	Conduct the Postal Check
February 2000	Complete MAF/TIGER integration for areas with mail delivery to city-style addresses

January 1999

VI.B. ADDRESS LISTING

OBJECTIVE

The Census Bureau will develop the Census 2000 address list in areas of predominantly noncity-style addresses.

MAJOR FEATURES

- Census enumerators are canvassing their assignment areas and listing each living quarters, recording its mailing address and describing its physical location. The enumerators will identify the approximate location of each structure containing living quarters by placing a spot on a census map, and they will update the information on their maps.
- The Census Bureau is converting the addresses and map updates into computer-readable form. As address listing is completed, the Census Bureau will data capture the address information in a keying operation. Address listing maps will be scanned to produce computer-readable images of the map spots. In the final data capture step, the map spots and updated map information will be entered into the TIGER database.
- The Master Address File (MAF) will be created for the listed areas from the address information identified and captured during the address listing operation.

MILESTONES

January-May 1998	Conducted map update operation (local governments' contributions)
February-June 1998	Updated TIGER database
July-December 1998	Conduct address listing operation
September 1998-February 1999	Add addresses to the MAF and map corrections to TIGER
January-April 1999	Conduct the Local Update of Census Addresses program for address listing areas

January 1999

VI.C. LOCAL UPDATE OF CENSUS ADDRESSES PROGRAM

OBJECTIVE

The Census Bureau will create partnerships with local and tribal governments to improve the Census 2000 address list for their jurisdictions.

MAJOR FEATURES

The Local Update of Census Addresses (LUCA) program, also known as the Address List Review program, is a partnership program that will allow the Census Bureau to benefit from local knowledge in developing its Master Address File (MAF). Participants will contribute to a more complete and accurate census for their area.

The LUCA program is made possible by the Census Address List Improvement Act of 1994 (Public Law 103-430) which, for the first time, authorizes designated representatives of local and tribal governments to review the MAF. The program will operate as follows:

- The local or tribal government will designate a liaison to review the portion of the MAF covering the area under its jurisdiction. The liaisons will be subject to the same restrictions prohibiting the disclosure of census information as census workers are. The address list is confidential under Title 13 and participants must sign an oath promising to protect the confidentiality of the addresses.
- The Census Bureau will send the liaisons listings from the MAF (in either paper or electronic form), corresponding maps, and a tally of MAF records for each census block in their jurisdictions.
- In city-style address areas, the liaison will provide input regarding individual addresses on the list, as well as addresses missing from the list that should be added. The Census Bureau will verify this input and provide feedback to the participants about the results.
- In address listing areas, the liaisons will provide input regarding the completeness and accuracy of the housing unit counts for each block. The Census Bureau will relist the addresses in blocks identified as having a different number of housing units and provide feedback about the number of housing units found.
- P.L. 103-430 allows the local participants to appeal final Census Bureau decisions.

- The Census Bureau will conduct the program during two distinct time periods, which correspond to the time schedule for developing the MAF. For areas with predominantly city-style mailing addresses, participants began reviewing the address list in May of 1998 because the MAF had been created using addresses obtained from the 1990 census and the USPS. For other areas, the address list will not be available for review until 1999, after the Census Bureau completes the address listing operation to create the MAF in these areas. These areas did get an early start by reviewing and updating maps for their communities in early 1998; this activity benefits the Census Bureau's later address listing work by yielding more up-to-date street information for reference by the address listing field staff.
- Procedures for this program in remote or sparsely settled areas, where we compile address lists during enumeration, are under development.

MILESTONES

City-Style Mailing Address Areas

January-February 1998	Mailed invitation letters for address list review to local and tribal governments
May 1998-February 1999	Local and tribal governments conduct review
October 1998-March 1999	Provide preliminary feedback to participants
April-July 1999	Provide specific address feedback to participants and reconcile differences
June 1999-January 2000	Local and tribal governments participate in LUCA appeals process

Noncity-Style Mailing Address Areas

January 1998	Mailed invitation letters for map review to local and tribal governments
January-May 1998	Local and tribal governments conducted map review
September 1998	Mailed invitation letters for address list review to local and tribal governments
January-April 1999	Local and tribal governments conduct address list review
March-June 1999	Provide feedback to participants
July 1999-January 2000	Local and tribal governments participate in LUCA appeals process

January 1999

VI.D. BLOCK CANVASSING

OBJECTIVE

The Census Bureau will ensure the completeness and accuracy of the Census 2000 address list for areas having predominantly city-style addresses used for mail delivery.

MAJOR FEATURES

- Census enumerators will canvass every road and street looking for every place where people live or could live, comparing the address of each living quarters with the addresses on the Census 2000 address list. They will add addresses missing from the address list, delete addresses on the address list that duplicate other addresses or do not exist on the ground, and ensure all addresses are assigned to the correct geographic location. The enumerators also will update census maps with information about the location and names of roads and streets.
- The Census Bureau will convert the new and corrected address and map information into computer-readable form. As block canvassing is completed, the Census Bureau will data-capture the address updates in a keying operation and will enter the updated map information into the TIGER database.
- The Master Address File will be updated with the results of the block canvassing in time to use the updated address information for delivery of questionnaires.

MILESTONES

January-May 1999	Conduct block canvassing
April-June 1999	Update the MAF and TIGER

January 1999

VI.E. POSTAL CHECK

OBJECTIVE

The Census Bureau will validate city-style addresses before the delivery of Census 2000 questionnaires through a check of the Master Address File (MAF) by U.S. Postal Service (USPS) letter carriers. This postal validation will help ensure that new construction and previously missed units are added to the MAF so that the Census Bureau can appropriately enumerate these units and their residents.

MAJOR FEATURES

- Following the Local Update of Census Addresses and block canvassing operations, the Census Bureau will give the USPS the city-style census addresses printed on cards.
- USPS letter carriers will compare the census addresses to the postal delivery addresses on their routes, adding addresses for which they do not have a census address card.
- The Census Bureau will enter the addresses added by the USPS to the MAF.

MILESTONES

November 1999	Provide census addresses to USPS
January-February 2000	USPS compares census addresses to delivery addresses
March-April 2000	Add new addresses to the MAF

United States
Census
2000

Section VII.

**Geographic
Database
Development—
TIGER**

VII. GEOGRAPHIC DATABASE DEVELOPMENT--TIGER

OBJECTIVE

The Census Bureau will provide the necessary information to link each living quarters in Census 2000 to a spatial location, each location to a specific geographic area, and each geographic area to the correct name or number and attributes.

MAJOR FEATURES

The geographic database for the census—the TIGER (Topologically Integrated Geographic Encoding and Referencing) system— provides the geographic structure for the control of the data collection, tabulation, and dissemination operations.

The geographic database constantly changes. Not only are new streets built, but some streets cease to exist, and the paths of some existing streets move. The names and address ranges associated with these streets change, too. Not only is the inventory of geographic entities different from year to year, but the boundaries, names, and related attributes for the entities also may change.

To ensure that the information in the TIGER database is complete and correct, the Census Bureau works in partnership with other federal agencies; state, local, and tribal governments; and others in the public and private sectors. We maintain the TIGER database through internal programs and partnership activities.

The Census Bureau obtains updates to the feature network, including associated address ranges, through the following operations:

- Census Master Address File (MAF) building activities. These include office resolution of addresses that cannot be automatically spatially located and the various address-list improvement operations.
- Partnership MAF building activities. These include the LUCA program and local participation in the resolution of addresses that need to be spatially located.
- Digital files. Local and tribal governments with suitable digital files provide them to the Census Bureau in lieu of a manual updating process. We transfer the update information from the local file to the TIGER database by an automated process.
- Local and tribal governments. In response to a preview of the census map of their jurisdiction, local and tribal governments may furnish the Census Bureau with updated street features and names.

We obtain updates to the boundaries, names, and attributes of the various geographic entities for which we tabulate data through various methods. These include:

- A voluntary survey designed to collect an accurate inventory of all functioning governmental units and to obtain up-to-date information on boundary changes.
- A program that provides the highest elected official of each functioning governmental unit with a copy of the census map that shows the jurisdiction boundaries we plan to use to tabulate Census 2000. The local or tribal official will review and validate these boundaries. This program replaces the local review of boundaries portion of the 1990 Post-Census Local Review Program.
- A program that provides local and tribal participants the opportunity to delineate Census 2000 participant statistical areas (block groups, census county divisions, census designated places, and census tracts).
- Additional programs that offer participants the opportunity to identify other areas for which the Census Bureau will tabulate data (for example, traffic analysis zones).

The Census 2000 boundaries for functioning governments and other legal entities are those legally in effect on January 1, 2000. Where the boundaries for any geographic entity intersect a feature, we assign any addresses associated with that feature to the geographic entity. The LUCA and boundary collection and validation programs also provide participants with the opportunity to review the assignment of addresses in their jurisdiction.

The information from all these programs and operations is inserted into the TIGER database where it is processed and undergoes various checks for consistency and accuracy. As required by specific census operations, the Census Bureau generates extracts from the TIGER database to produce the necessary map products and geographic files.

MILESTONES

January 1998	Began survey to collect January 1, 1998 boundaries
January 1999	Begin survey to collect January 1, 1999 boundaries
November 1999	Begin survey to collect January 1, 2000 boundaries
January 2000	Begin conducting final boundary validation
October 2000	Establish geographic structure for tabulation

Section VIII.
**Field Office
Infrastructure
and Staffing**

VIII.A. FIELD OFFICE INFRASTRUCTURE AND STAFFING

OBJECTIVE

The Census Bureau will develop an effective and cost-efficient infrastructure that supports complete and accurate enumeration in Census 2000 and the capture and processing of census information in time to meet constitutional and legislative requirements.

MAJOR FEATURES

Because the decennial census requires a massive mobilization of human and physical resources, the Census Bureau is developing an extensive temporary office infrastructure across the country to conduct Census 2000.

Physical Infrastructure

The major physical infrastructure components and their functions are listed below.

Regional Census Centers (RCCs) - 12 stateside centers (and an area office in Puerto Rico)

- Manage all census field data collection operations, address listing, and address list enhancement for city-style address areas through a network of Census Field Offices (CFOs) and Local Census Offices (LCOs)
- Coordinate the Local Update of Census Addresses program
- Produce maps
- Conduct geographic activities such as geocoding, updating the TIGER (Topologically Integrated Geographic Encoding and Referencing) database, and working with local participants on the participant statistical programs and the Public Law 94-171 Redistricting Data Program
- Recruit temporary staff
- Manage payroll and personnel administrative system

Census Field Offices (CFOs) - (402 Offices)

- Perform address listing
- Conduct local recruiting
- Perform clerical review of completed field address listing work

Local Census Offices (LCOs) - 520 Offices

- Produce enumerator maps and assignments

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- Conduct local recruiting
- Conduct outreach and promotion (for example, the Be Counted program)
- Conduct group quarters/special place/service-based enumeration operations
- Coordinate military enumeration (if applicable)
- Conduct update/leave operation (if applicable)
- Conduct list/enumerate operation (if applicable)
- Conduct field followup operations (nonresponse followup, coverage improvement followup, address verification, recanvass)
- Manage field staff payroll and personnel administrative system
- Perform block canvass operation (early opening LCOs)

National Processing Center (NPC) in Jeffersonville, Indiana

- Process address listing
- Check in mail returns
- Prepare questionnaires
- Conduct data capture
- Code questionnaires
- Conduct coverage edit by telephone
- Manage payroll and personnel administrative system

Other Data Capture Centers (DCCs) - Phoenix, Arizona; Pomona, California; and Essex in Baltimore County, Maryland

- Check in mail returns
- Prepare questionnaires
- Conduct data capture
- Manage payroll and personnel administrative system

Establishing the above offices will involve the following activities:

- Lease office space
- Obtain furniture, equipment, and supplies
- Procure and install computer hardware and software (except for CFOs)
- Establish voice and data line connections

Administrative Infrastructure

In addition to a physical infrastructure, there are administrative structure requirements that must be in place to recruit, manage, and pay the census workers.

These functions consist of the following:

- Develop a system of competitive pay rates
- Develop position descriptions

- Validate selection aid test
- Implement the Decennial Automated Name Check system for applicant background screening
- Implement the Preappointment Management System/Automated Decennial Administrative Management System to handle the hiring of temporary census workers and to manage the payroll system
- Develop a bonus/incentive pay system that yields quality data, staff retention, and high productivity

MILESTONES

November 1997-March 1998	Opened RCCs
June-September 1998	Opened CFOs
September 1998-November 1999	Open LCOs (Early opening LCOs September through November 1998; remainder of LCOs by November 1999)
April-September 1999	Open DCCs

VIII.B. FIELD OFFICE STAFFING

OBJECTIVE

The Census Bureau will recruit and train a sufficient number of temporary census workers to complete Census 2000 operations on schedule.

MAJOR FEATURES

The decennial census is the largest peacetime activity undertaken by the federal government. The Census Bureau will recruit and test people for a wide range of positions, such as local census office managers, enumerators, partnership specialists, media specialists, and clerks. This effort will require a large recruiting effort throughout the country.

Every job applicant will have to pass a written test and meet certain other requirements before being hired as a census worker. The Census Bureau will use the Decennial Applicant Name Check (DANC) system to screen all applicants for criminal histories. Qualified applicants who are selected will be required to take the oath of office and sign an affidavit of nondisclosure in which they agree they will "not disclose any information contained in the schedules [questionnaires], lists, or statements obtained for or prepared by the Bureau of the Census, to any person or persons either during or after employment."

The Census Bureau recognizes the changing composition of the labor force and the increasing difficulty of hiring and training a sufficiently large number of temporary census workers, especially enumerators, to conduct the census. We are making these changes for Census 2000:

- We are implementing innovative methods of setting pay and incentives for persons to work on Census 2000.
- We are attempting to expand the labor pool from which we can recruit by negotiating with other federal and state agencies that manage retirement and income transfer programs (federal civilian and military retirement, Public and Indian Housing program, Welfare to Work, and so on) to reduce any barriers and encourage recipients of the various programs to work for the Census Bureau.
- We are expanding enumerator training for Census 2000. More of the census workload will be incorporated into the training, with a focus on early supervisor review and feedback.

MILESTONES

January 1997	Began DANC system
June 1998	Began recruiting for census field offices

January 1999

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2000

Section IX.
Data Collection

IX.A. BASIC ENUMERATION STRATEGY

OBJECTIVE

The Census Bureau's goal is to obtain a completed questionnaire for every housing unit in Census 2000.

MAJOR FEATURES

To ensure that we obtain a completed questionnaire from every housing unit, the Census Bureau must first make sure that a questionnaire is delivered to every housing unit. We will accomplish this by using one of the following three basic data collection methods:

- **Mailout/mailback.** The Census Bureau will use U.S. Postal Service (USPS) letter carriers to deliver questionnaires to the vast majority of housing units that have city-style addresses (house number and street name).
- **Update/leave.** In areas where the addresses used for mail delivery are predominantly noncity-style, enumerators will leave addressed census questionnaires at each housing unit for the householder to complete and mail back. They also will update and make any necessary corrections and/or additions to their maps and their address lists as they deliver the questionnaires.
- **List/enumerate.** In very remote or sparsely populated areas, enumerators will visit each housing unit and complete a short-form or long-form census questionnaire. They also will develop an address list for the area and spot the housing unit's location on a map.

Additional data collection strategies noted in the following sections cover enumeration of special population groups (for example, persons in group quarters and on military bases), people with no usual residence, and nonresponse followup of housing units that did not return a questionnaire.

MILESTONES

March 2000	Deliver initial mailout/mailback questionnaires
March 2000	Conduct update/leave operation
March-May 2000	Conduct list/enumerate operation

IX.B. TELEPHONE ASSISTANCE AND THE INTERNET

OBJECTIVE

The Census Bureau will provide respondents with convenient access to obtain assistance in the completion of their Census 2000 questionnaires or to respond directly to the census.

MAJOR FEATURES

- The Census Bureau will contract for an extensive Telephone Questionnaire Assistance (TQA) operation to: 1) answer questions about the census questionnaire so that respondents can complete it and mail it back, 2) offer a means for callers to respond directly to the census if they have difficulty reading or understanding the questionnaire, and 3) allow respondents who did not receive a questionnaire to request that one be mailed to their home. This service will have national toll-free numbers (which are printed on the questionnaires) in English, Spanish, and other languages and will use an automated touch-tone system that can handle a large number of calls concurrently. Operators will record answers to the census over the telephone, if this service is requested during telephone assistance. There also will be a toll-free telephone device for the hearing-impaired.
- Respondents also will be able to access a census Internet website for assistance in completing the census questionnaire and, in some cases, for providing their responses to the census. Respondents may submit their responses via the Internet if they can provide a legitimate 22-digit, census short-form identification number. We will post only an English-language, short-form questionnaire for Internet reporting.

MILESTONES

January 1999	Award TQA contract
March-April 2000	Conduct Internet data collection
March-June 2000	Conduct TQA

IX.C. BE COUNTED PROGRAM

OBJECTIVE

The Be Counted program will provide a means for people to be included in Census 2000 if they believe they have not received a census questionnaire or were not included on one. The Census Bureau will place particular emphasis on developing ways to include population groups that historically have been undercounted.

MAJOR FEATURES

Be Counted Questionnaire

The Be Counted questionnaire is being designed to be respondent-friendly and easy to understand and complete by anyone who picks it up. This would include people with a usual residence who did not receive a questionnaire at their address, people who believe the returned questionnaire for their address excluded them, those who have no usual residence, and so forth. These forms will contain short-form questions along with several additional items needed to process and match the forms to the census results.

Questionnaires Available in Public Locations and in a Number of Languages

Be Counted questionnaires will be made available at public locations, such as Walk-in Questionnaire Assistance Centers and other places that will be identified through consultation with our local partners.

The distribution of Be Counted forms will begin just before Census Day and end before the nonresponse followup operation begins.

Be Counted forms will be printed in English, Spanish, Korean, Chinese, Vietnamese, and Tagalog.

MILESTONES

February 1999	Advertise contract for printing of Be Counted questionnaires
August 1999	Begin printing Be Counted questionnaires
April 2000	Conduct Be Counted Program

January 1999

IX.D. SPECIAL ENUMERATION PROCEDURES

OBJECTIVE

In Census 2000, the Census Bureau will implement a comprehensive set of procedures to enumerate people who do not live in traditional housing units. These include people who live in group quarters situations (for example, nursing homes, group homes, and colleges), people without housing, people who live at migrant and seasonal farm worker camps, people living on military installations and ships, and federal employees and their dependents living overseas. Special procedures also will be applied to enumerate those who live in unique areas of the country like remote Alaska.

MAJOR FEATURES

Special Place Facility Questionnaire Operation

Before we can enumerate people at these special locations, we must first identify the group living quarters located at these places. Identification will occur on a flow basis, by means of a procedure called the Special Place Facility Questionnaire Operation. This operation will update existing information for our inventory of special places and group quarters, identify additional group quarters, identify contact persons at each location, assign a group quarters type code, determine availability of administrative records, identify any housing units at or associated with the special place or group quarters, and collect other administrative information. Most information about the group living quarters will be collected during an automated Computer-Assisted Telephone Interview (CATI), but some of this information will be completed by personal visit using a paper Special Place Facility Questionnaire.

Group Quarters Enumeration

Staff in our local census offices will conduct the group quarters enumeration. Starting in January 2000, census workers will make advance visits to the group quarters to meet with facility staff and discuss the upcoming census enumeration. These visits are very beneficial because they promote and encourage participation in the census and identify any difficulties that might be encountered during the enumeration. In April 2000, census workers will enumerate people in each group quarters by listing all the residents and distributing questionnaire packets. When needed, enumerators will provide assistance in completing the questionnaires. Census Bureau staff will verify the counts by comparing them to the Special Place Facility Questionnaire results and to facility administrative records. In addition, a systematic sample of group quarters will be recontacted to verify the data.

A small number of facilities, such as jails and prisons, will self-enumerate their facility. These facilities will use census procedures to conduct the enumeration, and the facility employees become special sworn census employees to protect the confidentiality of the census information.

Transient Night (T-Night) Operation

Transient night, commonly referred to as T-Night, is an operation designed to count persons living a mobile lifestyle on Census Day. T-Night will take place on the day before Census Day (on Friday, March 31). T-Night enumerators will visit and interview people occupying campgrounds at racetracks, recreational vehicle campgrounds or parks, commercial or public campgrounds, fairs and carnivals, and marinas. Every person enumerated during T-Night will have the opportunity to report a usual residence.

On T-Night, enumerators will visit each assigned T-Night place, meet with a contact person at the site to explain the purpose of the visit, offer the Privacy Act notice, answer any questions, and verify information about the site. Then the enumerator will complete a questionnaire for each person in the living quarters at the assigned location.

Remote Alaska Enumeration

Several methods will be used to enumerate the varied types of areas in Alaska. Several cities and their vicinities will be designated as mailout/mailback areas due to their concentrated populations and city-style addresses. This includes the two largest cities, Anchorage and Fairbanks, and selected smaller cities such as Sitka, Haines, and Juneau. The rest of Alaska will be enumerated using the list/enumerate and update/leave methods, which also are being used in the sparsely populated areas of the lower 48 states, and, in addition, by using remote enumeration methods. The timing of the mailout/mailback, update/leave, and list/enumerate operations will be the same as in other states. Remote enumeration will begin earlier than the other operations.

Remote enumeration is unique to Alaska. Outlying or remote settlements in Alaska range in population from a few people to several hundred persons. Roads rarely exist to link the widely scattered settlements. Most of these settlements, located throughout the state, are accessible only by small-engine airplane, snowmobile, four-wheel-drive vehicle, dogsled, or a combination of these. Because of this, enumeration of the remote areas will begin earlier, in mid-February, but all census questions will be asked in relation to Census Day (April 1). The special timing will permit travel to these areas during the period when conditions will be most favorable. For example, the ground and rivers still will be frozen so planes can fly in and out, and the residents will still be at home. Once the spring thaw (or "breakup" as it is known locally) begins, travel to some of these areas will be difficult

or impossible, and the people will leave home to fish and hunt. Enumerators will have to finish their work before then, or they will miss a large part of the population.

Domestic Military/Maritime Enumeration

People living on U.S. military installations and maritime vessels will be enumerated during Census 2000. To enumerate people residing on U.S. military installations and on military ships, the Census Bureau will work with the Department of Defense and the U.S. Coast Guard to identify housing units and other living quarters on the installations and ships assigned to a home port in the United States. Different enumeration methodologies, such as mailing census questionnaires to housing units on installations and enumerating people at their work station, will be used. The Census Bureau will work with the U.S. Maritime Administration and others to identify maritime vessels in operation at the time of the census and mail enumeration materials to those vessels for completion.

Overseas Enumeration

The Census Bureau will count federal employees assigned overseas (including members of the Armed Forces), and their dependents in Census 2000 and include them in the apportionment counts. Also, we will count in the overseas population persons on board military ships assigned to a foreign home port. We will ask the Department of Defense and other federal agencies to provide counts of their employees assigned overseas (and their dependents) by home state from personnel records of the agencies or other administrative records.

MILESTONES

November 1998-March 2000	Conduct Special Place Facility Questionnaire Operation
January 2000	Conduct advance visits to special places/group quarters
January 2000	Conduct local knowledge update of special places and group quarters locations
February 2000	Begin enumeration in remote Alaska
February-July 2000	Federal agencies compile overseas counts by home state
March 31, 2000	Conduct T-Night operation
April-May 2000	Enumerate people at group quarters and conduct coverage improvement validation

IX.E. ENUMERATION OF PEOPLE WITH NO USUAL RESIDENCE

OBJECTIVES

An operation called Service-Based Enumeration (SBE) is designed to provide people with no usual residence, who might not be included through other enumeration methods, an opportunity to be enumerated.

MAJOR FEATURES

SBE is conducted at selected service locations, such as shelters and soup kitchens, and at targeted nonsheltered outdoor locations. These procedures will not provide a count of “homeless” persons or of service users.

- The Census Bureau will work with local governments and community-based organizations to identify the list of service locations open at census time.
- Using simplified enumeration procedures and forms, the Census Bureau will conduct a one-time enumeration at shelters and soup kitchens and at stops made by mobile food vans with regular schedules.
- Enumerators will visit targeted non-sheltered outdoor locations where people live and eat. These sites will be identified by local officials, advocacy groups, and community-based organizations.
- The Census Bureau will work with local officials and community-based organizations to identify camps and other locations where migrant and seasonal farm workers can be found at the time of the census.

Additionally, people with no usual residence will be able to pick up Be Counted questionnaires at selected non-SBE service locations, such as travelers’ aid centers and health care clinics serving people with no usual residence.

MILESTONES

February-September 1999

Late March 2000

April 2000

Develop list of service locations

Conduct enumeration of people at service locations

Distribute Be Counted questionnaires at selected non-SBE service locations

January 1999

IX.F. SPECIAL DATA COLLECTION METHODS FOR TARGETED AREAS

OBJECTIVE

The Census Bureau plans to overcome barriers to successful enumeration in Census 2000 by implementing special data collection methods in targeted areas.

MAJOR FEATURES

Special census methods and procedures are available for improving cooperation and enumeration in hard-to-enumerate areas. Areas will be designated for the targeted methods, such as urban update leave (UUL), update/enumerate (UE), and team and blitz enumeration, that will be used in Census 2000:

- The regional census centers will use the planning database, consisting of a range of housing, demographic, and socioeconomic variables that are correlated with nonresponse and undercounting, in conjunction with their knowledge of local conditions to identify the most appropriate areas in which we might use targeted methods designed to overcome difficult enumeration barriers.
- A team or crew of enumerators will go into a targeted area and conduct the enumeration in a short period of time. Team enumeration will be used in areas where field conditions may interfere with the timely completion of the enumeration. These conditions may be high concentrations of multi-unit buildings, enumerator safety concerns, low enumerator production rates, and so forth.
- A Be Counted program will make unaddressed Be Counted questionnaires available in sites such as Walk-in Questionnaire Assistance Centers and other publicly accessible locations for pick up and completion by people who believe that they have not been counted in the census.
- Mail response rates and maps will be available to local and tribal officials periodically during the census enumeration. They will work in partnership with census staff to identify unexpectedly low response areas. Targeted enumeration efforts and additional outreach and publicity activities then will be implemented.
- In partnership with local and tribal governments and community-based organizations, the local census offices will establish Walk-in Questionnaire Assistance Centers in their communities (for example, in non-English speaking areas) to assist respondents in completing their questionnaires. These centers will be established in community centers, large apartment buildings, and so forth.

- Assistance in various foreign languages will be provided for people who are not able to respond to questionnaires in English or Spanish.
- Letters will be mailed to managers of large multi-unit structures and gated communities informing them of upcoming census operations.
- In pre-identified census blocks, the UE methodology will be employed where census enumerators will canvass the area, update the address list, and complete census questionnaires for all occupied and vacant housing units. In pre-identified census blocks in urban areas such as public housing developments and other areas where the U.S. Postal Service might deliver a quantity of questionnaires to a building lobby, the Census Bureau will employ an UUL method of enumeration. Census Bureau enumerators will deliver questionnaires to each unit and update the address list.

MILESTONES

March 2000	Open Walk-in Questionnaire Assistance Centers
April 2000	Conduct Be Counted program

IX.G. COVERAGE EDIT AND TELEPHONE FOLLOWUP

OBJECTIVE

The Census Bureau will improve the coverage of persons in housing units in Census 2000.

MAJOR FEATURES

In Census 2000, a coverage edit will be performed to review Census 2000 questionnaires for potential missing, incomplete, or inconsistent data and to identify large households and complex households, such as those with nonrelatives.

For mail-return questionnaires, the coverage edit will be performed as follows:

- Completed questionnaires will be checked for discrepancies between the number of persons reported as members of a household and the number of persons for whom census information was provided on the form. For example, the respondent may have indicated that five people lived in the housing unit, but there was information for only two people.
- Other questionnaires that would fail edits or be targeted for reinterview include: forms returned by mail where the population count is blank and the number of persons reported within the questionnaire is exactly six, mailed forms with household person counts of seven or more (the questionnaire has space to report population data for a maximum of six persons), and households of four or more persons that contain nonrelatives.
- To resolve these discrepancies in the questionnaires and to reinterview targeted households, telephone clerks, employed by a Census Bureau contractor and under the direction of Census Bureau personnel, will call the households.

Similarly, questionnaires completed by enumerators during the nonresponse followup operation will be reviewed to ensure that the data were collected for all persons reported as living at the address.

The coverage edit should not be confused with the content edit (which is for missing or incomplete responses to population or housing items). The content edit in Census 2000 will be completed solely by computer, that is, by statistical imputation, with no telephone or personal visit followup.

MILESTONES

March-June 2000	Identify mail-return housing units requiring coverage edit followup
April-July 2000	Conduct coverage edit followup operations
April-July 2000	Conduct coverage edit review of enumerator-return questionnaires

IX.H. NONRESPONSE FOLLOWUP STRATEGY

OBJECTIVE

The Census Bureau will make every effort to secure a response in Census 2000 from every resident and every housing unit. The Bureau will conduct a field or telephone followup of housing units that do not return their questionnaires by mail. This operation is known as nonresponse followup (NRFU). One hundred percent of nonresponding households will be followed up so that we obtain a completed questionnaire for each one of them.

MAJOR FEATURES

- During the initial response period (the period immediately before and immediately after Census Day), the Census Bureau will issue reminder publicity urging people to return their questionnaires.
- Following a period of mail response check-in, nonresponding households are identified and the followup lists generated.
- Enumerators will perform NRFU at all nonresponding addresses. They will obtain a completed questionnaire for each household.
- In mailout/mailback areas, enumerators will also follow up 100 percent of the housing units identified as nonexistent or vacant by the U.S. Postal Service.
- In update/leave areas, enumerators will also follow up 100 percent of the housing units where the Census Bureau was unable to deliver questionnaires during the update/leave operation.
- The Census Bureau will implement a number of quality assurance checks of NRFU to ensure the completeness and accuracy of the operation. Crew leaders will conduct a coverage edit of 100 percent of the questionnaires, with failures being revisited and corrected. Interviewing results for key data items from each assignment area will be compared with expected values for the area and anomalies identified for review. And finally, a systematic sample of addresses will be revisited and reinterviewed to identify entire enumerator assignments that need to be reviewed.

MILESTONES

April-July 2000 Conduct NRFU

IX.I. COVERAGE IMPROVEMENT FOLLOWUP

OBJECTIVE

After nonresponse followup, the Census Bureau will carry out an additional operation to further improve the coverage of housing units and persons.

MAJOR FEATURES

This operation includes a followup of three types of addresses:

- 1) In mailout/mailback areas, those addresses for which questionnaires were returned in the nonresponse followup (NRFU) operation reporting the housing unit as vacant or delete AND which were not confirmed by the U.S. Postal Service as undeliverable as addressed.
- 2) In update/leave areas, all addresses for which a questionnaire was returned as vacant or nonexistent in NRFU, but the questionnaire was not returned as undeliverable during the update/leave operation.
- 3) In both mailout/mailback and update/leave areas, mail returns checked in but not data-captured (for example, lost or blank forms).

The Census Bureau believes that a followup of the first two types of cases is important because of the potential coverage gain as a result of detecting units that were incorrectly classified by enumerators. Inclusion of the third case type is a safety net; this category is expected to be exceptionally small.

Census staff will visit each address, determine the status of the address as of Census Day, and enumerate as appropriate. Both short- and long-form data will be collected.

MILESTONES

July-August 2000 Conduct Coverage Improvement Followup

IX.J. UNDUPLICATION OF MULTIPLE RESPONSES

OBJECTIVE

The Census Bureau will review and select person information when more than one questionnaire data set is captured for a census address.

MAJOR FEATURES

One of the main goals of Census 2000 is to make it simpler for people to be counted. In addition to our standard enumeration methodology for an area (for example, mailout/mailback data collection), census forms will be made available in public places. Non-English language forms will be provided upon request. Responses to the census also will be accepted over the telephone during Telephone Questionnaire Assistance and via the Internet. Providing these response options will make it easier for persons to be counted but may increase the possibility that more than one response will be submitted for a given person or a household.

High-speed data capture capabilities, the Master Address File (MAF), and our automated matching technologies will allow us to resolve situations where more than one form was received for an address. Every housing unit address in the census will have a unique identifier, the census ID number. Every response to the census will be data-captured and linked with this identifier. When responses are received that do not have an ID (for example, telephone responses) they will be linked to an address in the MAF and a census ID will then be assigned. We will then determine when multiple returns have been captured for any ID, and matching rules will determine which persons to count at that address.

Unduplication of multiple responses in past censuses required a massive clerical operation because only a small subset of person names was data-captured. It would have been necessary to clerically compare the information on the individual forms and then feed the results into the computer. Data capture in Census 2000 includes all the names on the form. Advances in computer technology, particularly computer storage, retrieval, and matching, along with image capture and recognition, have given the Census Bureau the tools to match responses more efficiently and unduplicate multiple responses.

MILESTONES

August-September 2000	Conduct unduplication of multiple responses
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January 1999

United States
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2000

Section X.

**American Indian
and Alaska Native
Areas and Hawaiian
Homelands**

X. AMERICAN INDIAN AND ALASKA NATIVE AREAS AND HAWAIIAN HOMELANDS

OBJECTIVE

The Census Bureau will conduct the best possible enumeration in Census 2000 of American Indian and Alaska Native Areas (AIANA) and Hawaiian Homelands.

MAJOR FEATURES

The Census Bureau will base its strategy for enumerating the populations in AIANA and in Hawaiian Homelands on building partnerships for:

- Address list development
- Geographic programs
- Marketing
- Field operations
- Data collection methodologies
- Data dissemination

Address List Development

In areas where the U.S. Postal Service (USPS) delivers mail to city-style addresses, we will use the USPS Delivery Sequence File to build the address list and use the mailout/mailback methodology for enumeration. In other areas, we will conduct an address-listing operation prior to the census and use the update/leave methodology. In this operation, the enumerator leaves the form for the respondent to return by mail. In more remote areas, we will use the list/enumerate methodology (for remote Alaska enumeration, see section IX.D), which involves the enumerator listing the housing unit and conducting the census interview in one visit. Tribal governments will have an opportunity to review the address lists for their jurisdictions as part of the Local Update of Census Addresses program. (See section VI.C.)

Geographic Programs

Table X-1 shows the wide diversity of programs the Census Bureau will offer American Indian tribes, Alaska Native areas, and Hawaiian Homelands to review and define geographic areas.

Outreach and Promotion

Census Bureau staff and tribal liaisons will compile a listing of all electronic and print media within the marketing area for paid promotion dissemination. In addition, the Census Bureau will seek the help of tribal liaisons and Complete Count Committees

(if the tribes form them) to assist with the promotional campaign (census awareness and education), using national or local materials.

Field Operations

The Census Bureau plans to obtain assistance with the following activities:

- Provide local office space for testing and training
- Participate in training local census office staff (such as in cultural awareness)
- Assist in recruiting strategies for filling census jobs and identifying local referrals for assistance
- Assist and advise census field staff about potential problem situations
- Attend and participate in periodic census/tribal staff meetings
- Identify sites for Questionnaire Assistance Centers
- Identify locations for distributing Be Counted questionnaires

Data Collection Methodologies

The Census Bureau will work with tribal officials to select the appropriate data collection methodology or combination of methodologies for each area. These methodologies will range from mailout/mailback to update/leave and list/enumerate.

Data Dissemination

Most Census 2000 data collected in the AIANA and the Hawaiian Homelands will be processed and disseminated in the same way as information collected for the rest of the nation. (See chapter XII.) The Census Bureau will work with tribal liaisons and organizations to meet their data needs.

MILESTONES

September 1998	Completed a series of tribal consultation meetings
April 2000	Complete definition of geographic areas

Table X-1. Census 2000 Geographic Programs for American Indian and Alaska Native Areas and Hawaiian Homelands

Geographic Program	Type of Area	Purpose of Program
Tribal Review Program	Federally recognized tribes with a land base	Provide boundary and feature updates
Block Definition Project	Federally recognized tribes with a land base and federally-recognized tribes in Oklahoma without a land base	Identify Census 2000 block boundaries
Participant Statistical Areas	Federally recognized tribes with a land base and federally-recognized tribes in Oklahoma without a land base	Define statistical areas such as census tracts, block groups, census designated places, and census county divisions
Tribal Subdivision Program (proposed)	Federally recognized tribes with a land base	Designate special subdivisions (new for Census 2000)
Tribal Jurisdiction Statistical Area Program	Federally recognized tribes in Oklahoma without a land base	Delineate an identifiable land area as a tribal jurisdiction statistical area
Tribal Designated Statistical Area Program (proposed)	Federally recognized tribes outside Oklahoma without a land base	Delineate an identifiable land area as a tribal designated statistical area
Alaska Native Regional Corporation Program	Alaska Native areas	Alaska Native Regional Corporations review and update boundaries
Alaska Native Village Statistical Area Program	Alaska Native areas	Alaska Native Regional Corporations delineate, review, and update boundaries for these areas
State Reservation Program	State-recognized tribes with a land base	State government liaison can review and update boundaries
State Designated American Indian Statistical Area Program (proposed)	State-recognized tribes without a land base	Replaces 1990 Tribal Designated Statistical Area program for state-recognized tribes
Hawaiian Homelands (proposed)	Areas recognized by the Department of Hawaiian Homelands	New program to identify and include Hawaiian Homelands in TIGER database

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Section XI.

Telecommunications Support and Automated Data Processing

XI.A. TELECOMMUNICATIONS SUPPORT

OBJECTIVE

The Census Bureau will provide the infrastructure necessary to support the Census 2000 telecommunications requirements.

MAJOR FEATURES

The planned Census 2000 telecommunications network will encompass communication links between the following facilities:

- Census Bureau Headquarters in Suitland, Maryland
- 12 Regional Offices (ROs)
- Bowie, Maryland, Computer Center
- 12 Regional Census Centers (RCCs) and the Puerto Rico Area Office
- Jeffersonville, Indiana, National Processing Center (NPC)
- Three contracted Data Capture Centers (DCCs): Phoenix, Arizona; Pomona, California; and Essex in Baltimore County, Maryland
- 520 Local Census Offices (LCOs)

In addition, we intend to establish communication links to the planned commercial telephone centers to support Telephone Questionnaire Assistance.

We plan to use Asynchronous Transfer Mode (ATM) as our communications link (through frame relay or another type of dedicated link) between headquarters, the Bowie Computer Center, and the DCCs. The ROs, RCCs, and LCOs will be linked to the frame relay cloud (the communications network provided by the telephone company) through leased, secure T1 communication lines.

MILESTONES

Define telecommunications requirements for:

Currently operational	Bowie Computer Center
October 1995-April 1997	Regional Census Centers
January 1996-March 1997	Jeffersonville National Processing Center
January 1996-March 1997	Contracted Data Capture Centers
July-September 1997	Local Census Offices

January 1999

XI.B. DATA CAPTURE SYSTEM

OBJECTIVE

The Census Bureau will utilize the best available data capture methodology in Census 2000.

MAJOR FEATURES

The Census 2000 data capture methodology must utilize the best available technology that will accommodate the use of respondent-friendly questionnaires. The Census Bureau has identified components of the data capture process that may be best performed by private-sector partners. The Census Bureau will take advantage of available commercial off-the-shelf hardware and software representing technological advancements in information technology and systems without limiting itself to creating in-house solutions.

The following are the most significant features of the Data Capture System 2000:

- Four centers will be responsible for data capture functions.
- A full electronic data capture and processing system for imaging questionnaires.
- Questionnaires returned by mail will be sorted automatically to ensure timely capture of critical information needed before nonresponse followup activity begins.
- Optical mark recognition (OMR) will be used for all check-box data items.
- Optical character recognition (OCR) will be used to capture write-in character-based data items.
- A key-from-image operation will capture and resolve difficult OCR cases.
- Quality assurance will be conducted on data keying and scanning activities.
- The use of electronic imaging and captured data will reduce the logistical and staffing requirements that handling large volumes of paper questionnaires would require.

MILESTONES

March 1997	Awarded Data Capture System 2000 contract
March-May 1997	Prepared system development plan
March-June 1997	Prepared operations and facilities plan
January 1998	Awarded Data Capture Services Contract
March-July 1998	Demonstrated plan (Census 2000 Dress Rehearsal)
April 1999-January 2000	Open data capture centers/install equipment
November 1999-January 2000	Finalize procedures and training
March 2000	Begin data capture of Census 2000 forms

XI.C. AUTOMATED DATA PROCESSING SYSTEM

OBJECTIVE

The Census Bureau will develop an effective and efficient system for controlling, managing, and processing Census 2000 data.

MAJOR FEATURES

The Census 2000 Data Processing System will be a complex network of operational controls and processing routines intended to store and service the decennial control and data requirements. It will include the necessary interactions with the Master Address File (MAF), Operations Control System 2000 (OCS 2000), Data Capture System 2000 (DCS 2000), and Telephone Questionnaire Assistance (TQA), not only to control, accept, and store the data but also to provide the necessary computer processing to produce the census.

The Census 2000 Data Processing System is divided into three operational phases of precensus, census, and post-census activities.

- Precensus activities will be those required for converting the MAF into the decennial control database that remains linked to both TIGER (Topologically Integrated Geographic Encoding and Referencing) and the MAF. These activities will include form sampling (long or short), selecting address identifications for the form types, targeting identifications (for example, areas targeted for special enumeration methods), and preparing the address files for printing labels on the questionnaires. Control information (both geographic and address related) will be provided to the OCS 2000 for guiding both field canvassing and address capture processing.
- Activities concurrent with census data collection/capture will be those necessary to coordinate the check in and storage from the multiple sources of collection (DCS 2000, Be Counted questionnaires, and telephone), to define the responding/nonresponding universes, and to provide enumeration controls and workload to the field. Included in these activities will be the loading and updating of the central databases for the storage of all census responses provided through the enumeration and data capture processes.
- Post-census activities will be those necessary to prepare data from the original responses for release. These activities will include unduplicating multiple responses, editing and imputation, coding of write-in response data (such as race, language, industry and occupation, and place of work/migration), tabulation recoding, and data disclosure avoidance.

In addition, detailed data files will be prepared from information collected on the short- and long-form questionnaires. These activities will include editing the responses, applying statistical techniques to account for missing data, and applying weights to sample records from the long-form questionnaires. The files will be provided to the American FactFinder (formerly known as the Data Access and Dissemination System) for data dissemination.

MILESTONES

July 1999	Receive the Census 2000 MAF
September 1999	Send initial address files to printing contractors
April 2000	Define nonresponse followup universe
July 2000	Define coverage improvement followup universe
September-October 2000	Tabulate data and create the file for apportionment counts
October-November 2000	Perform the complete count data edits, imputation, disclosure avoidance, and tabulation recoding
December 2000	Start providing complete count data files to the American FactFinder
June-August 2001	Prepare detailed data files for information collected on the long-form questionnaires and provide these files to the American FactFinder

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Section XII.

Dissemination and Products

XII.A. TABULATION AND DISSEMINATION PROGRAM

OBJECTIVE

The Census Bureau will use new technology and meet customer demand for faster, more flexible access to census data.

MAJOR FEATURES

Census 2000 data will be disseminated mainly using a new data retrieval system called the American FactFinder. During its development, this system was known as the Data Access and Dissemination System (DADS). Still in the developmental stages, DADS will provide an interactive electronic system that will enable data users to access prepackaged data products, data documentation, and online help, as well as build custom data products online and offline. The first version of the American FactFinder will be available for limited use in January 1999; in April 1999, the system will have additional functions and data files. Census 2000 data products will be available beginning January 2001. Figure XII-1 depicts the various products available through the American FactFinder.

Certain data products--such as those including summary profile data--will be disseminated in traditional media as well as through the American FactFinder. The options and issues related to determining the types of data products and their medium of dissemination have been discussed with various segments of the data-user community; these consultations will continue until the final decisions are made. The Census Bureau has solicited the advice and recommendations of data users throughout the planning, design, and testing stages of the American FactFinder.

The American FactFinder will be accessible to the widest possible array of users through the Internet, Intranet, and all available intermediaries, including the nearly 1,800 State Data Centers and affiliates, the 1,400 Federal Depository libraries and other libraries, universities, and private organizations.

The American FactFinder is being designed with the capability to:

- Provide access to Census 2000 data such as the type of information shown in the 1990 census Summary Tape Files and Public-Use Microdata Samples. Data users will have online viewing, tabulating, downloading, and ordering capabilities.
- Produce customized products, including various display formats such as tables, charts, graphs, and maps based on Census Bureau or user-defined geographic areas.

- Furnish metadata that provides documentation and explanatory information for data subjects and geographic areas.
- Provide users with an online help feature for using the system and accessing census data, as well as instructions on how to seek further assistance.

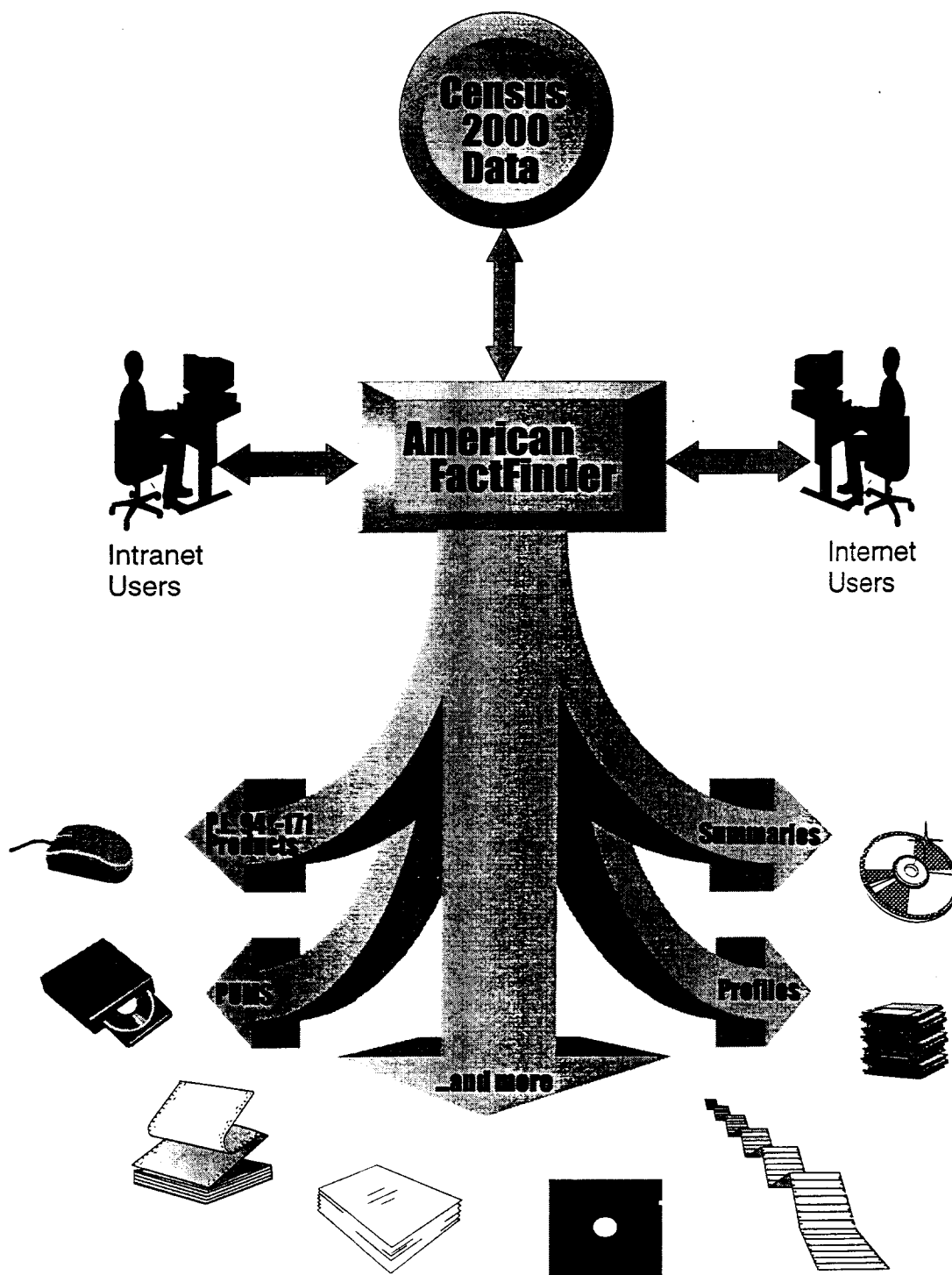
There are many issues concerning Census 2000 data dissemination that we must resolve in-house and with the user community. We are working with data users to explore questions of access for all users. For example, because some segments of the data-user community have less access to computers, we are asking how their data needs can be met and how the Census Bureau can work with partners and stakeholders to provide access for these data users.

Also, data users are being asked for recommendations on the types of data to be predefined in the American FactFinder and included in various data products. Our ongoing channels of communication will continue to inform them on the progress of the American FactFinder. These channels include meetings and workshops with specific groups and organizations and articles in census publications.

MILESTONES

September 30, 1996	Released DADS Prototype 1, "proof of concept" showing basic design, technology, and functionality
October 31, 1997	Released DADS Prototype 2 with expanded functions such as data product creation and online help
January-April 1999	Begin release of Dress Rehearsal product prototypes for Census 2000 (redistricting data first, other 100 percent and sample data to follow)
January 2001	Begin release of Census 2000 redistricting data products
March 31, 2001	Complete release of redistricting data to states

Figure XII-1. American FactFinder



XII.B. P.L. 94-171 REDISTRICTING DATA PROGRAM

OBJECTIVE

The Census Bureau must satisfy the requirements for Public Law (P.L.) 94-171 through the Census Bureau's Census 2000 Redistricting Data Program.

MAJOR FEATURES

This program offers the redistricting officials in each state an opportunity to provide us with the information to create the geography we need to tabulate their redistricting data. We then provide them with the redistricting data and related geographic products that the states use to complete federal and state redistricting according to their specific deadlines.

The Census 2000 Redistricting Data Program consists of:

Phase 1, the Block Boundary Suggestion Project, offers state redistricting officials the opportunity to identify visible features that they suggest be held as Census 2000 block boundaries. The Census Bureau will identify these boundaries in its TIGER database and, once agreed upon, hold them as block boundaries for tabulation of Census 2000.

Phase 2, the Voting District Project, is the phase where state redistricting officials may submit the boundaries and geographic codes of the voting districts (election precincts) and state legislative districts using whole census blocks. The Census Bureau will insert these boundaries into the TIGER database.

Phase 3, Release of Census 2000 Redistricting Data, is the dissemination of Census 2000 data and accompanying geographic products to the governor and majority and minority legislative leaders responsible for redistricting in each state. States that provided voting districts will receive their data tabulated by voting district. States that provided state legislative districts will receive their data tabulated by state legislative district. The products, in paper and electronic form as appropriate, include:

- Data files for standard tabulation areas (for example; county, city, census tract), census block, and--when provided by the state--voting districts and state legislative districts, broken down by major race groups and Hispanic origin for the total population and for persons 18 years and over
- TIGER/Line files (including voting districts and state legislative districts when provided by the state)

- County Block Maps (displaying voting districts when provided by the state)
- Voting District Outline Maps (displaying state legislative districts when provided by the state)
- Census Tract Outline Maps
- *Congressional District Atlas*, 108th Congress of the United States, in digital form and as a printed report, including a series of maps and tables from the TIGER database for the districts of the 108th Congress resulting from the Census 2000 reapportionment
- Wall map of the United States by the congressional districts of the 108th Congress

The Census Bureau is required by P.L. 94-171 to deliver redistricting data/geographic products to the states within 1 year after Census Day. Individual states have their own timing requirements for the completion of state and federal redistricting. Priority processing of census data and geographic products will be given to those states that must complete redistricting early.

MILESTONES

January 1999	Complete Phase 1, Block Boundary Suggestion Project
January 1999	Begin Phase 2, Voting District Project
March 31, 2001	Complete Phase 3, release of P.L. 94-171 redistricting data/geographic products to states
January 2003	Release <i>Congressional District Atlas</i> , 108th Congress

XII.C. GEOGRAPHIC PRODUCTS

OBJECTIVE

The Census Bureau will relate the data collected and tabulated from the Census 2000 to geographic entities for data users. So data users may understand and effectively use census data, the Census Bureau provides geographic products and appropriate tools to identify the names, boundaries, codes, and other attributes of the geographic entities.

MAJOR FEATURES

The names, boundaries, and attributes of the geographic entities for which we tabulate data are identified through a variety of means, including internal Census Bureau operations and participant programs with state, local, and tribal governments, and regional and metropolitan planning agencies. We also work with these participants to update the features--including their names and address ranges--shown in our geographic database.

We incorporate the information relating to the geographic entities and features into the TIGER database. We prepare extracts from TIGER for use in conducting the census and in tabulating and disseminating census data. (Special geographic extracts from the TIGER database will support the American FactFinder.)

The geographic products planned for Census 2000 are:

- Maps in digital and hardcopy form. These will include detailed maps (such as the County Block Maps), outline maps (such as the Census Tract Outline Maps), and thematic maps (such as those showing percent of population by county for a specific racial category). We also will generate supporting maps based on a specific data product.
- TIGER Extracts in digital form (hardcopy may be available). These will include products such as the TIGER/Line files, cartographic boundary files, and comparability files. We will generate appropriate supporting TIGER extracts based on specific data products and to support noncensus programs (for example, the TIGER/Census Tract Street Index for the Home Mortgage Disclosure Act).

The geographic entities we report in data products vary. Some geographic entities—and related products—remain constant across data products. Other geographic entities are relevant at different times and in different products. For example:

- Voting districts are an important geographic entity for P.L. 94-171 geographic products but are not included in the “regular” census products. We prepare special maps and geographic products showing these areas.
- While 100 percent data (from the questions asked of all persons) are available for census blocks, sample data (from the long form) are not. Similarly, some data files will not include certain geographic entities or geographic entities below a certain population (for example, places with populations of fewer than 10,000).
- Reapportionment from Census 2000 will be reflected in the redistricting for the 108th Congress. Initial data files for Census 2000 will contain the districts of the 106th Congress.

MILESTONES

March 31, 2001	Release products for the Redistricting Data Program to the states
April-May 2001	Release the Census 2000 TIGER/Line files
June 2001	Release county block maps, census tract outline maps, and county subdivision outline maps
June 2003	Complete the release of products for the districts of the 108th Congress

Section XIII.

**Testing,
Dress Rehearsal,
Evaluation, and
Research**

XIII.A. TESTS AND RESEARCH

OBJECTIVE

The Census Bureau is engaged in an ambitious testing and research program designed to develop new approaches and techniques for possible implementation in Census 2000. The ultimate goal of this program is to boost participation in the census, thereby improving coverage and reducing costs.

MAJOR FEATURES

- Even before the 1990 census data products were completely released, the Census Bureau initiated many tests and research projects (such as focus group and cognitive studies) between 1992 and 1994. Early testing was needed to allow time to study fundamental reforms in census design. The following is a summary of these efforts:
 - The earliest tests and research focused on ways to increase the willingness and ability of respondents to respond by mail to the census by using: (1) questionnaire design and mailing package formats that were easier for respondents to understand and complete and (2) notifications for alerting and reminding respondents to complete the forms.
 - Various testing and research studies were conducted concerning technologies to speed data collection and ways to give people greater flexibility in how they respond to the census. Other research assessed current and emerging data capture technologies (for example, electronic imaging and optical mark recognition) that offer the potential for cost reductions for processing.
 - Research on automated address list maintenance focused on supporting the development of a continuously updated Master Address File linked to the TIGER (Topologically Integrated Geographic Encoding and Referencing) database.
 - Considerable testing and research were conducted to study administrative records including: examining respondent attitudes about using records held by other agencies, assessing public reaction to collecting social security numbers, investigating various state and local administrative records systems, creating a database of sources of administrative records, and developing effective methods to use when importing, standardizing, and matching files.
- At mid-decade, the 1995 Census Test provided an additional opportunity to test many procedures and features proven successful in the earlier tests and research and to fulfill additional test objectives. This test evaluated 15 activities,

among them a multiple mail strategy with respondent-friendly forms, a new methodology to count persons with no usual residence, techniques of sampling for nonresponse, a mail strategy of sending Spanish-language forms to targeted areas, and the collection of long-form (sample) data using various length forms (to see how response rates were affected by form length).

- Ongoing cost-modeling research developed statistical models using data available from the various census tests. This research experimented with predicting many variables, such as census response, data collection workloads, and staff sizing of local census offices.
- The 1996 National Content Survey (formally known as the U.S. Census 2000 Test) was the principal vehicle for testing and evaluating subject content for Census 2000. It also provided information on questionnaire design and mailing strategy and techniques to improve coverage.
- The 1996 Race and Ethnic Targeted Test (formally known as the 1996 Census Survey) was the principal vehicle for testing and evaluating several major alternatives for asking the race and ethnicity questions. It studied how the proposed alternatives affected the distribution and quality of responses compared with the 1990 questions.
- The 1996 Community Census tested various features of the quality check (Integrated Coverage Measurement program) on two American Indian reservations and an in urban site. Some of these features included techniques for measuring coverage in housing units and noninstitutional group quarters, use of administrative records for coverage improvement, and experimental questions designed to enhance address-listing procedures.

XIII.B. CENSUS 2000 DRESS REHEARSAL

OBJECTIVE

The Census 2000 Dress Rehearsal tested the various operations, procedures, and questions that were considered for Census 2000 under as near census-like conditions as possible.

MAJOR FEATURES

The Dress Rehearsal provided for operational testing of the National Processing Center, Regional Census Center, Local Census Office, and Data Capture Center procedures and systems planned for use in Census 2000. We employed the full array of methods, techniques, materials, work flows, equipment applications, and promotion and outreach programs considered for use at that time in Census 2000 as well as components of a traditional census. Attachment B provides preliminary information used for planning the dress rehearsal, detail about the methods used, and a midterm report on the dress rehearsal.

New procedures being considered for Census 2000--such as respondent-friendly forms readily available in many locations, multiple mail contacts with each household, digital capture of forms, and statistical estimation techniques--have all been tested individually in earlier operations. The Dress Rehearsal provided a census-like environment to test simultaneously both traditional and sampling census procedures considered for use in Census 2000. To meet new requirements, the Dress Rehearsal also included some operational procedures and systems that were not tested in any prior field or processing activity.

The Census Bureau launched an unprecedented partnership effort for the Dress Rehearsal and Census 2000. For the Dress Rehearsal, we worked closely with state, local, and tribal governments, community organizations, and others to conduct a wide range of census activities. For example, we asked local and tribal governments to review the Master Address File to ensure its completeness and accuracy. Other partnership efforts included working closely with local and tribal governments to implement the promotion and outreach program and to facilitate the availability of census questionnaires. The Dress Rehearsal communities will work with us as partners in the final evaluation of planned Census 2000 operations.

From the Dress Rehearsal, we will produce prototype redistricting data products required by P.L. 94-171. We also will create minimal standard printed and machine-readable 100 percent and sample data products.

Sites

The Census Bureau selected three sites for the Census 2000 Dress Rehearsal. The sites are the city of Sacramento, California; 11 counties in an area near and including the city of Columbia, South Carolina; and the county of Menominee, Wisconsin, including the Menominee American Indian Reservation. The combination of a large urban site, a small city-suburban-rural site, and an American Indian Reservation site is providing a comprehensive testing environment for refining planned Census 2000 methodology. These three sites reflect characteristics that are providing a good operational test of Census 2000 procedures and systems.

- Sacramento, California - sampling census site

This site consists of the city of Sacramento, which had 369,365 residents and 153,362 housing units in the 1990 census. The Census Bureau's official 1996 estimate showed an increase in the city's population to 376,243.

Sacramento contains great racial and ethnic diversity, including significant African American, Hispanic, and Asian and Pacific Islander populations. This diversity allowed us to test proposed Census 2000 methods designed to reduce the differential in the count and produce an accurate census for all components of the population. Sacramento is also a primary media market, which allowed us to implement a prototype of the Census 2000 advertising program. The site, representing the size of the area covered by a typical urban local census office in Census 2000, will provide an understanding of the effectiveness of census operations and systems in this environment.

- Columbia, South Carolina - traditional census site

This site contains the city of Columbia in its entirety, including a small portion in Lexington County; the town of Irmo, which is in Richland and Lexington Counties, in its entirety; and the following contiguous counties in north central South Carolina:

Chester	Kershaw	Newberry
Chesterfield	Lancaster	Richland
Darlington	Lee	Union
Fairfield	Marlboro	

The 1990 census found that the counties comprising the Columbia site had 650,035 residents and 251,874 housing units. Our official 1996 estimates showed an increase for the 11 counties to 671,234 persons.

The Columbia site exhibits the characteristics of a small city-suburban-rural area that contains living situations and socioeconomic characteristics that we do not find in a predominately urban environment. This site provided our only opportunity to test procedures for developing a Master Address File in an area containing both city-style addresses (house number and street name) and noncity-style addresses (rural route or box number). The site offered a mix of difficult and presumably easy-to-enumerate areas in a suburban and rural setting.

In the Columbia site, we will not use sampling and estimation techniques to produce the census counts. Instead, we conducted a 100 percent followup of households that did not respond by mail or telephone. We also are conducting a Post Enumeration Survey (PES) in the Columbia site to evaluate the accuracy of the results. Attachment B provides more details about this alternative methodology.

- Menominee County, Wisconsin, including the Menominee American Indian Reservation - sampling census site

Menominee County and the Menominee American Indian Reservation are located in northeastern Wisconsin. Based on the 1990 census, the Menominee Reservation had 3,397 residents and 1,176 housing units. Menominee County had 3,890 residents and 1,742 housing units in 1990. (The Menominee Reservation and Menominee County share the same exterior boundary, but pockets of interior land totaling more than two square miles that are part of the county are excluded from the reservation. The Dress Rehearsal includes the entire county, however.) The Census Bureau's official 1996 estimates for Menominee County showed an increase to 4,609 persons.

Conducting the Dress Rehearsal on an American Indian reservation allows the Census Bureau to test proposed Census 2000 methodologies for reducing the differential in the count for this component of the population. The Menominee Reservation was recommended by the Census Advisory Committee on the American Indian and Alaska Native Populations for the Dress Rehearsal.

MILESTONES

August 1997	Developed and updated address lists
October 1997	Reviewed and corrected address lists - local and tribal officials
December 1997	Opened local census offices
April 18, 1998	Census Day
July 1998	Completed census data collection
September 1998	Released Census 2000 Dress Rehearsal Midterm Status Report
November 1998	Complete quality check or PES data collection
November 1998	Complete census and quality check or PES processing
December 1998	Release site counts
January 1999	Release prototype P.L. 94-171 redistricting products
March 31, 1999	Complete Dress Rehearsal evaluations

XIII.C. QUALITY ASSURANCE

OBJECTIVE

The Census Bureau will detect and correct performance errors that can significantly affect coverage and data quality.

MAJOR FEATURES

Quality Assurance (QA) activities will cover critical precensus, data collection, and data processing operations. QA plans will be developed for the following activities:

- Field geocoding
- Field address listing, validation, and map spotting
- Printing of public use forms

- Input materials
 - Map production
 - Assembly kits - materials used by enumerators in the field

- Paper-based data collection operations

- Computer-assisted data collection operations
 - Personal interviewing
 - Telephone interviewing

- Data capture modes
 - Optical character recognition
 - Optical mark recognition
 - Keying from paper
 - Keying from images
 - Scanning
 - Digitizing

- Clerical or automated matching and coding

Each of these operations is designed and implemented to meet decennial objectives. The QA is tailored not only to eliminate significant nonsampling errors but also to be integrated efficiently into the operation work flow.

MILESTONES

January 1998-January 1999	QA on geographic support activities (geocoding, digitizing, and map production)
August 1998-July 1999	QA on address listing and validation
July 1999	QA on printing public use forms
March-October 2000	QA on data capture operation
April-October 2000	QA on paper-based and computer-assisted data collection
April 2000-December 2001	QA on data processing

XIII.D. POST-ENUMERATION SURVEY

OBJECTIVE

The Census Bureau will conduct a Post-Enumeration Survey (PES) to measure the overall and differential coverage of the U.S. population in Census 2000 and to provide base population figures for other Census Bureau programs, such as the Census Bureau's intercensal population estimates, American Community Survey, and other demographic surveys. Under the traditional census plan, the PES will not be used to adjust the census figures for reapportionment purposes.

MAJOR FEATURES

Before the census, we will conduct an independent listing of the housing units in the blocks chosen for the PES sample. These housing units will be matched to census housing units for the same blocks. The resulting final list will be used for interviewing people at each household. The list of people enumerated from the interviews will be matched to the Census 2000 results and the differences will be reconciled.

The telephone phase of PES interviewing will occur toward the end of nonresponse followup (NRFU); personal visit interviews will begin after NRFU closes out for a local census office.

The final differences will provide a measurement of coverage of data collected using traditional methods, that is, an evaluation of the completeness of Census 2000.

MILESTONES

September-December 1999	Address listers compile an independent list of addresses in the block clusters selected for the PES sample
January-March 2000	Conduct housing unit followup
March-April 2000	Create an enhanced list of all housing units to be interviewed
May-August 2000	Conduct PES person interviews by telephone and personal visit
July-August 2000	Conduct nonresponse conversion operation for noninterviews
September-November 2000	Conduct person match and followup
November 2000-April 2001	Compute population and variance estimates
April 2001	Release PES person estimates

January 1999

XIII.E. DEMOGRAPHIC ANALYSIS

OBJECTIVE

The Census Bureau will use independent estimates to evaluate the completeness of coverage in Census 2000, to ensure the demographic consistency of the census data, and to validate the Post-Enumeration Survey (PES) coverage results.

MAJOR FEATURES

Demographic analysis (DA) represents a macro-level approach to measuring coverage. The demographic approach differs fundamentally from the PES estimates, which represent a micro-level approach (case-by-case matching).

Demographic estimates of net undercount are derived by comparing census results to estimates based largely on aggregate administrative data. The national estimates for the population below age 65 are derived by the basic demographic accounting equation:

$$\text{Population} = \text{Births} - \text{Deaths} + \text{Immigrants} - \text{Emigrants}$$

Aggregate Medicare data are used to estimate the population 65 years and over. To produce estimates below the national level, the equation is modified to allow for domestic migration. Because administrative records are utilized, the DA estimates are derived independently of the census being evaluated.

Use of Demographic Analysis in Census 2000

Demographic analysis and other independent benchmarks will provide checks at three distinct points in the Census 2000 process. First, independent housing benchmarks will be compared to the Master Address File (MAF) results to evaluate the completeness of our address lists--this will be done as early as 1999, well before Census Day. Second, DA will be compared with preliminary census results as an early quality check and to provide an early assessment of coverage differentials at the national and state levels. In addition, this review can identify content problems and possible anomalies due to geocoding and other nonsampling errors. Finally, the DA estimates will be used to ensure the demographic consistency of the final census results and validate the coverage measurement results of the PES.

MILESTONES

August 1998	Implemented features of DA in Dress Rehearsal
July 1999	Evaluate quality/completeness of MAF
August 2000	Evaluate quality/completeness of “early” census results
December 2000	Produce DA population estimates for use in evaluating census and PES results

January 1999

XIII.F. EVALUATION PROGRAM

OBJECTIVES

The Census Bureau will obtain information about the quality of Census 2000 data to provide for future census planning.

MAJOR FEATURES

Evaluations of key components of Census 2000 will be planned before and implemented during the Census 2000 process. Evaluation results will be released in the form of a Report Card on Census 2000. The Census Bureau intends to release the Report Card by March 31, 2001.

The components of Census 2000 to be evaluated will fall into these broad categories:

- A. Content and Data Quality
- B. Master Address File
- C. Coverage Measurement
- D. Coverage Improvement
- E. Promotion and Partnerships
- F. Multiple Response Resolution
- G. Field Infrastructure
- H. Technology Related
- I. Census Estimation
- J. Quality Assurance
- K. General

MILESTONES

January 1998	Defined components of Census 2000 Dress Rehearsal Report Card
January 1999	Release Census 2000 Dress Rehearsal Report Card
June 1999	Finalize the plan for Census 2000 Report Card. This plan will reflect what we learned from the Census 2000 Dress Rehearsal as well as from our many internal/external consultations.
October 1999-March 2001	Implement evaluation studies
March 2001	Issue Census 2000 Report Card
Beyond March 2001	Prepare and issue evaluation reports

January 1999

XIII.G. RESEARCH AND EXPERIMENTATION PROGRAM

OBJECTIVE

The Census Bureau will conduct a program of research and experimentation during the Census 2000 cycle that will provide information for planning the 2010 census.

MAJOR FEATURES

As part of each decennial census since 1950, the Census Bureau has incorporated a research program to gather data needed to facilitate planning for the next census. For Census 2000, the Census Bureau will conduct experiments and research on decennial census activities to assess alternative methods that may be considered for the 2010 census. These research activities will be coordinated and managed in a comprehensive research program.

The process for conducting this program will involve the following:

- Develop criteria for selection of research
- Solicit ideas for research
- Review proposals and select research based on pre-identified criteria and resources
- Ensure that implementation of research is coordinated with all participating Census Bureau divisions
- Monitor budget and schedules for research
- Review results and coordinate the documentation of results into a Census 2000 results memorandum series

MILESTONES

September 1997	Defined selection criteria for the research and experimentation program
November 1997	Solicited ideas for research and experimentation
March 1998	Identified research and experiments to be included (initial selection)
October 1998-December 2000	Implement research and experiments
January-May 1999	Identify research and experiments unique to the traditional census design (final selection)
January 2001-December 2003	Document results of research and experiments

January 1999

XIII.H. ADMINISTRATIVE RECORDS RESEARCH

OBJECTIVE

The Census Bureau will explore the feasibility of using administrative records in future decennial censuses.

MAJOR FEATURES

The Census Bureau is evaluating the feasibility of using administrative records to supplement or improve traditional data collection methods. The Census Bureau plans to include an experiment in Census 2000 in parallel with standard methods. The results will provide a basis for analysis and decision making on the expanded use of administrative records in the 2010 census. To support this experimentation, the Census Bureau will develop an administrative records system using selected federal records.

Developing an administrative records system for experimentation in Census 2000 involves the following:

- Identify and acquire administrative records files from selected national programs that contribute to coverage and to demographic characteristics
- Develop methods to evaluate the quality of the administrative records system and the component files
- Conduct experiments in Census 2000 to support planning for the 2010 census

An administrative records research agenda has been established to identify relevant issues and the corresponding research projects that are required. In addition, the Census Bureau is conducting privacy research to gauge public acceptance of administrative records use.

MILESTONES

April 1997	Conducted privacy group meetings on use of administrative records
March 1998	Evaluated 1996 Community Census use of administrative records
October 1998	Generated the Dress Rehearsal administrative records files
March 1999	Evaluate the Dress Rehearsal administrative records files
April 1999	Generate the administrative records prototype

January 1999

July 1999	Evaluate the administrative records prototype
March 2000	Generate the Statistical Administrative Records System
April 2000	Begin implementation activities for Census 2000 experiments

XIII.I. 2010 CENSUS PLANNING

OBJECTIVE

The Census Bureau will carry out a long-range planning and design effort for the 2010 census.

MAJOR FEATURES

Demographic and social changes in the United States will make the year 2010 differ from 2000 even more than 2000 differed from 1990. For example, many of the baby boomers will be out of the work force, a generation of children will have been brought up with computers, several minority groups will have grown considerably as a proportion of the total population, and the World War II generation that relied on social security and Medicare will be followed by generations who cannot rely entirely on such entitlements. The demographic changes and probable reduction of federally run programs will influence the data requirements and the manner in which the census can be taken in 2010. Therefore, early planning for the 2010 census may be even more important than it was for Census 2000.

The cornerstone of the 2010 planning effort is the identification of possible designs for the next decade. As the designs are selected, we can determine the best research to conduct in Census 2000 (see section XIII.G "Research and Experimentation Program") to provide data for analyzing the alternatives. Also crucial to the planning effort is the development of performance measures, such as cost, total quality, managerial feasibility, and total benefits, which will allow the quantitative comparison of design alternatives. In addition, the 2010 program must include examinations of the policy and legislative issues associated with each design and the implications of census designs related to public concerns about privacy and confidentiality.

Other planning considerations include changing technology and stakeholder concerns. Because of the lead time needed to implement major technological changes and the impact of technology on the feasibility of key census activities, an ongoing program of technological research is a necessary adjunct to other 2010 program activities. We also want to incorporate stakeholder input as early as possible.

MILESTONES

October 1997	Identified potential designs for 2010
January 1998	Proposed experiments and research for implementation in Census 2000
October 1998	Began external advisory process for 2010 census

January 1999

October 1998	Began implementation activities for Census 2000 experiments
September 2000	Begin documenting empirical evidence for proposed 2010 census designs
September 2001	Define post-Census 2000 experiments and research for 2010 census

January 1999

United States
Census
2000

Section XIV.
Puerto Rico

XIV. PUERTO RICO

OBJECTIVES

Census 2000 operations in Puerto Rico will be comparable in scope to stateside activities. The Census Bureau is working in partnership with the government of Puerto Rico--as represented by the Puerto Rico Planning Board (PRPB)--on the program objectives to ensure that Census 2000 data meet the legal requirements set forth in Title 13, U.S. Code, as well as the specific needs of Puerto Rico.

MAJOR FEATURES

Census 2000 operations in Puerto Rico will be built around the same four fundamental strategies to be used stateside:

- **Strategy One: Build Partnerships at Every Stage of the Process**

The Census Bureau signed a Memorandum of Agreement with the governor of Puerto Rico that outlines the mutual roles and responsibilities of each party in the conduct of Census 2000 on the island.

In consultation with the PRPB and its local Interagency Committee, census questionnaire content was developed to meet the legislative and program needs of Puerto Rico.

An advertising and promotion campaign designed to build awareness of the census and boost participation will be developed for Puerto Rico that will take into account its specific needs.

The Census Bureau will conduct an address listing operation in Puerto Rico in 1998. This will allow for the full implementation of the 1999 Local Update of Census Addresses (LUCA) program. Address listing also is the basis for the update/leave method of enumeration. During update/leave, field enumerators update the address list and map and leave a census questionnaire at each housing unit for the residents to complete and mail back.

- **Strategy Two: Keep it Simple**

Using the findings from our census testing and research, the Census Bureau has designed user-friendly questionnaires that are simpler and easier for respondents to understand and complete. Forms will be available in both Spanish and English.

Census questionnaires and other forms will be made more readily available to respondents and will be placed in Walk-In Questionnaire Assistance Centers and in other locations that will be identified through consultation with our local partners.

- **Strategy Three: Use Technology Intelligently**

Using the update/leave methodology for data collection for the first time in Puerto Rico will give respondents the opportunity to complete the census questionnaires themselves and return them by mail. This will allow the Census Bureau to make use of the same technological advances that will be used stateside.

The Census Bureau will make greater use of the telephone as a data collection tool, in addition to its use in providing assistance to respondents with questions about Census 2000.

Data users will have access to Census 2000 data and products through the Internet, using the American FactFinder system. American FactFinder will give users the flexibility to extract and tabulate census data quickly to meet their specific data needs.

- **Strategy Four: Use Special Techniques to Improve Coverage**

We are automating many operations performed clerically in 1990, so that sources of error in manual operations are avoided.

Our reengineered method of producing the address list and integrating it with the geographic database is expected to improve the quality of the files needed for controlling census operations and tabulating the results.

Expanding the marketing and promotion programs, the Telephone Questionnaire Assistance program, and other enumeration support activities will address lessons learned in the 1990 census.

Using operations such as telephone followup and coverage improvement followup allows us to focus efforts in areas where the potential for coverage improvement is greatest.

MILESTONES

October 1997	Completed Phase 1 of Block Boundary Definition Program
November 1997	Completed questionnaire content determination process
February 1998	Finalized Memorandum of Agreement

January 1999

September 1998	Began address listing activities
December 1998	Finalize Census 2000 plan for Puerto Rico
April 1999	Conduct LUCA program
March 2000	Conduct update/leave enumeration
January 2001	Release total counts for Puerto Rico
June 2001	Deliver Puerto Rico redistricting counts

United States
Census
2000

Section XV.
Island Areas

XV. ISLAND AREAS

American Samoa, Commonwealth of the Northern Mariana Islands, Guam, and U.S. Virgin Islands

OBJECTIVES

Census 2000 operations in American Samoa, the Commonwealth of the Northern Mariana Islands, Guam, and the U.S. Virgin Islands (collectively referred to as the Island Areas) will be conducted by the Census Bureau in partnership with the government of each Island Area. These partnerships will ensure that Census 2000 data meet the legal requirements set forth in Title 13, U.S. Code, as well as the specific needs of each Island Area.

MAJOR FEATURES

Census 2000 operations in the Island Areas will be built around three fundamental strategies that also will be used stateside:

- **Strategy One: Build Partnerships at Every Stage of the Process**
 - The Census Bureau will develop and sign a Memorandum of Agreement with the governor of each Island Area that will outline the mutual roles and responsibilities of each party in the conduct of Census 2000 for each Island Area.
 - In consultation with the local Interagency Committee established by each Island Area, the Census Bureau developed the census questionnaire content that meets the legislative and programmatic needs of each Island Area.
 - An advertising and promotion campaign designed to build awareness of the census and boost participation will be developed for each Island Area that will take into account its specific needs.
 - Data collection in the Island Areas will use the list/enumerate method. This decision was based on recommendations from Island Area representatives and an analysis of the various data collection methodologies. During the list/enumerate operation, field enumerators list the housing units, show their spatial location on a map, and enumerate the residents. However, unlike the stateside procedures, we will deliver Advance Census Reports (ACRs) before the list/enumerate operation and ask respondents to complete the form and hold it for the enumerator to pick up.

- **Strategy Two: Keep it Simple**

- Using the findings from our census testing and research, the Census Bureau has designed respondent-friendly questionnaires and forms that are simpler and easier for the enumerators to administer and for the respondents to understand and answer.
- Census questionnaires and forms will be made more readily available to respondents and will be placed in convenient places.

- **Strategy Three: Use Technology Intelligently**

- The Census Bureau will make greater use of the telephone to provide assistance to respondents with questions about Census 2000.
- Data users will have access to Census 2000 data and products using the American FactFinder system. American FactFinder will give users the flexibility to extract and tabulate census data quickly to meet their specific data needs.

MILESTONES

August 1998	Completed questionnaire content determination process
December 1998	Finalize Census 2000 plan for the Island Areas
September 1999	Finalize Memorandum of Agreement for each Island Area
April-May 2000	Conduct list/enumerate for Island Areas
April 2001	Release total counts for each Island Area

United States
Census
2000

Appendices

APPENDIX A. GLOSSARY OF ABBREVIATIONS AND ACRONYMS

ACF	(Address Control File) The residential address list used in the 1990 census to label questionnaires, control the mail response check-in operation, and determine the nonresponse followup workload.
AIANA	(American Indian and Alaska Native Area) A Census Bureau term referring to these entity types: American Indian reservation, American Indian trust land, state designated American Indian statistical area, tribal jurisdictional statistical area, tribal designated statistical area, tribal subdivision, Alaska Native Regional Corporation, Alaska Native Village, and Alaska Native village statistical area.
ATM	(Asynchronous Transfer Mode) A process that increases the amount of information that can be electronically transferred at one time between sites.
CAPI	(Computer Assisted Personal Interviewing) A method of data collection using a laptop computer in which the questions to be asked are displayed on the computer screen and responses are entered directly into the computer.
CATI	(Computer Assisted Telephone Interviewing) A method of data collection using telephone interviews in which the questions to be asked are displayed on a computer screen and responses are entered directly into the computer.
CCD	(Census County Division) A subdivision of a county that is a relatively permanent statistical area established cooperatively by the Census Bureau and local government authorities. Used for presenting decennial census statistics in those states that do not have well-defined and stable minor civil divisions that serve as local governments.
CD-ROM	(Compact Disk-Read Only Memory) An optical disk that is created by a mastering process and used for storing large amounts of data. Unlike standard computer disks and diskettes, CD-ROMs can be used only to read stored data, not to update or change its content.
CFO	(Census Field Office) One of approximately 402 temporary Census Bureau offices to be established in Census 2000 to manage address listing field work and conduct local recruiting.

- C&P** (Cost and Progress) A component of the electronic Management Information System that reports daily progress for major operations and periodic costs for field data collection activities.
- DA** (Demographic Analysis) An independent, macro-level approach to validate the census and PES results in Census 2000. Estimates using demographic analysis are derived by comparing aggregate sets of data or counts. Records used for demographic analysis include birth and death records, immigration statistics, and Medicare data.
- DADS** (Data Access and Dissemination System) Now known as the American FactFinder, DADS is a generalized electronic system for all access and dissemination of Census Bureau data. This interactive electronic system is being designed to allow efficient and cost-effective access to data generated by the various areas of the Census Bureau. The DADS system will serve as the vehicle for accessing and disseminating data from Census 2000 and from the American Community Survey.
- DANC** (Decennial Applicant Name Check) This automated system will be used to screen all applicants' backgrounds for criminal histories to facilitate the selection, hiring, promotion, and payroll of qualified and suitable applicants for the conduct of Census 2000.
- DCC** (Data Capture Center) One of four decentralized Census Bureau facilities (one permanent, three temporary) that will check in Census 2000 questionnaires returned by mail, create images of all questionnaire pages, and convert data to computer readable format using OMR, ICR, and data keying technologies. The DCCs also will perform other computer processing activities, including automated questionnaire edits, work flow management, and data storage. Called "processing office" (PO) in previous censuses.
- DCS 2000** (Data Capture System 2000) The data capture system that will be used to capture information from census forms. This system will incorporate the following activities: processing more than 120 million incoming forms; digitally capturing and processing billions of bits of information on the forms; converting automatically the image of the form to text-based data; and editing/repairing data that the system is unable to decipher automatically.
- DFI** (Decennial Field Interface) The collection of systems that will be used in census field offices to control and manage the census data collection effort. It includes, among others, the operations control, payroll and personnel, map production, and management information systems.

DSF	(Delivery Sequence File) A computerized file containing all delivery point addresses serviced by the U.S. Postal Service. The U.S. Postal Service updates the DSF continuously as its letter carriers identify addresses for new delivery points or changes in the status of existing addresses.
GQ	(Group Quarters) A place where people live that is not a housing unit. The Census Bureau classifies all persons not living in housing units as living in group quarters. There are two types of group quarters: institutional (for example, correctional facilities, nursing homes, and mental hospitals) and noninstitutional (for example, college dormitories, ships, hotels, motels, group homes, missions and shelters).
HH	(Hawaiian Homelands) Areas created as a result of the Hawaiian Homes Commission Act of 1920 to provide agricultural, pastoral and residential land for native Hawaiians.
HU	(Housing Unit) A house, an apartment, a mobile home or trailer, a group of rooms, or a single room occupied as a separate living quarters or, if vacant, intended for occupancy as a separate living quarters. Separate living quarters are those in which the occupants live separately from any other individuals in the building and which have direct access from outside the building or through a common hall. For vacant units, the criteria of separateness and direct access are applied to the intended occupants whenever possible. If that information cannot be obtained, the criteria are applied to the previous occupants.
LCO	(Local Census Office) A temporary Census Bureau office to be established for Census 2000 data collection purposes. Called "district office" (DO) in previous censuses.
L/E	(List/enumerate) A method of data collection in which enumerators list each residential address and enumerate the household in one visit.
LHFU	(Large Household Follow-up) A census operation that follows up on households that indicated on their census form that there are six or more persons in that housing unit.
LUCA	(Local Update of Census Addresses) A Census 2000 program (also known as Address List Review), established in response to requirements of P.L. 103-430, that provides an opportunity for local and tribal governments to review

and update individual address information in the MAF and associated geographic information in the TIGER database to improve the completeness and accuracy of both computer files.

- MAF** (Master Address File) A computer file based on a combination of the addresses in the 1990 ACF and current versions of the DSF, supplemented by address information provided by state, local, and tribal governments. The MAF is being updated throughout the decade to provide a basis for producing address labels needed to deliver Census 2000 questionnaires, keep track of which forms have been returned and which need followup, serve as the sampling frame for the Census Bureau's periodic demographic surveys, and support other Census Bureau statistical programs.
- MAS** (Master Activity Schedule) A component of the electronic Management Information System that contains all census activities and provides decision-support functions, such as critical path analysis.
- MCD** (Minor Civil Division) A primary government and/or administrative subdivision of a county, such as a township, precinct, or magisterial district.
- MO/MB** (Mailout/mailback) A method of data collection in which the U.S. Postal Service delivers addressed questionnaires to residents who are asked to complete and mail back the questionnaire to the appropriate Census Bureau office.
- NPC** (National Processing Center) The Census Bureau's permanent data processing facility in Jeffersonville, Indiana.
- NRFU** (Nonresponse Followup) A census followup operation in which temporary field staff, known as enumerators, visit or telephone addresses from which no questionnaire was returned by mail, or from which a telephone response was not received.
- OCR** (Optical Character Recognition) Software to identify alphabetic and numeric characters contained on the census questionnaires.
- OCS 2000** (Operations Control System 2000) Automated system to guide both field canvassing and address capture procedure.

OMR	(Optical Mark Recognition) Technology that uses an optical scanner and computer software to scan a page, recognize the presence of marks in predesignated areas, and assign a value to the mark depending on its specific location on a page.
PAMS/ ADAMS	(Preappointment Management System/Automated Decennial Administrative Management System) An integrated structure of administrative management programs that supports applicant tracking and processing, background checks, selection records, recruiting reports, personnel and payroll processing, and archiving of historical data.
PES	(Post-Enumeration Survey) This survey is conducted independently of the Census. It is designed to provide a measurement of overall and differential coverage of the U.S. population.
P.L. 94-171	(Public Law 94-171) The public law that requires the Census Bureau to provide selected decennial census data tabulations to the states by April 1 of the year following the census enumeration. These tabulations are used by the states to redefine the areas included in each congressional district and in other districts used for state and local elections, a process called redistricting.
P.L. 103-430	(Public Law 103-430) The public law that amends Title 13, United States Code, to allow designated local and tribal officials access to the address information in the MAF to verify its accuracy and completeness. This law also requires the U.S. Postal Service to provide address information it compiles to the Census Bureau to improve the MAF.
PUMS	(Public Use Microdata Sample) Computerized files containing a small sample of individual long-form census records showing the population and housing characteristics of the people included on those forms.
QA	(Quality Assurance) A systematic approach to build quality into a process.
RCC	(Regional Census Center) One of 12 temporary Census Bureau offices established to manage LCO activities and to conduct geographic programs and support operations such as automated map production. The Census Bureau also will open an "Area Office" to manage census operations in Puerto Rico.

RO	(Regional Office) One of 12 permanent Census Bureau offices established in 12 cities throughout the country to implement outreach and promotion activities during the census period and to conduct survey enumeration and other decentralized work of the Census Bureau.
SBE	(Service-Based Enumeration) An operation designed to enumerate people at places where they might receive services, such as shelters, soup kitchens, and other selected locations. This operation is designed to provide an opportunity to be enumerated to people who may be missed in other Census 2000 operations.
SP	(Special Place) A residence where people live or stay other than the usual house, apartment, or mobile home. Examples are colleges and universities, nursing homes, hospitals, prisons, and military bases.
STF	(Summary Tape File) A series of census summary tabulations of complete count and/or sample population and housing data available for public use on electronic media.
TIGER	(Topologically Integrated Geographic Encoding and Referencing) A computer database that contains a digital representation of all census-required map features (streets, roads, rivers, railroads, lakes, and so forth), the related attributes for each, and the geographic identification codes for all entities used by the Census Bureau to tabulate data for the United States, Puerto Rico, and Island Areas. The TIGER database records the interrelationships among these features, attributes, and geographic codes and provides a resource for the production of maps, entity headers for tabulations, and automated assignment of addresses to a geographic location in a process known as "geocoding."
T-NIGHT	(Transient Night) An enumeration procedure conducted to enumerate people occupying campgrounds at racetracks, recreational vehicle (RV) campgrounds or RV parks, commercial or public campgrounds, fairs and carnivals, and marinas.
TQA	(Telephone Questionnaire Assistance) A toll-free service that will be provided by a commercial phone center to answer questions about Census 2000 or the census questionnaire and allow callers to respond directly to the census.
U/L	(Update/leave) A method of data collection in which enumerators personally deliver a census questionnaire to a household to be completed and returned by mail and at the same time update the address list.

- USPS** (U.S. Postal Service) The organization responsible for delivering the mail questionnaires in Census 2000, and the producer of the DSF.
- WAN** (Wide Area Network) A group of computers linked within a network, such as the Census Bureau's regional offices, to exchange and share information. Whereas a "local area network" may link computers within a building or among several buildings, a WAN covers more area and distance.

**APPENDIX B. ADDITIONAL INFORMATION CONCERNING
THE CENSUS 2000 DRESS REHEARSAL**

1. Contrasts Between the Three Dress Rehearsal Sites
2. Census 2000 Decision Memorandum No. 36, "Key Features of the Census 2000 Dress Rehearsal with Aspects of a Nonsampling Methodology in the South Carolina Site."
3. Census 2000 Dress Rehearsal Mid-Term Status Report

*******NOTE*******

This appendix is available in hard copy on request.